88/57 c

Regional Oral History Office
The Bancroft Library

University of California
Berkeley, California

CALIFORNIA WOMEN IN BOTANY

Annetta Carter	UC Herbarium Botanist, Collector and Interpreter of Baja California Plants
Mary DeDecker	Botanist and Conservationist of the Inyo Region
Elizabeth McClintock	California Academy of Sciences Curator, Ornamental Plant Specialist

With Interview Introductions by
Lincoln Constance, Betty Gilchrist,
Peter Rowlands, John Hunter Thomas

Interviews Conducted by
Carol Holleuffer
1985

It is recommended that this oral history be cited as follows:

To cite the volume: California Women in Botany, an oral history conducted in 1985, Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1987.

To cite individual interview: Annetta Carter, "UC Herbarium Botanist, Collector and Interpreter of Baja California Plants," an oral history conducted 1985 by Carol Holleuffer, in California Women in Botany, Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 1987.

THE DAILY CALIFORNIAN
May 17, 1991

UC Berkeley botanist dies

Annetta Mary Carter, a prominent figure at UC Berkeley's Herbarium, died Wednesday at the age of 83, following a long battle with cancer.

Carter, who worked at the Herbarium for more than 60 years, was recognized internationally as an expert on the flora of Baja California.

During her tenure as principal botanist, and after her retirement in 1968, she conducted extensive research on plant life around California and in northern Mexico.

Carter served as president of the California Botanical Society in 1967, and was a member of the California Academy of Sciences and the international Society of Women Geographers.

Her work in the Sierra de la Giganta mountain range in Baja California earned Carter honors from the Sociedad Botanica de Mexico. She discovered several new plant species, many of which now bear her name.

Carter is survived by a nephew, Warren Carter; two nieces, Margaret Annetta Carter Freeman and Mary Lou Carter Powell; a cousin, Grace Zoll; and her lifetime companion Florence Mabel Little.

98/57

OAKLAND TRIBUNE
May 16, 1991

Annetta Carter, UC botanist

By Carol Brydolf
Tribune staff writer

BERKELEY — Annetta Mary Carter, internationally known expert on the flora of Baja California and former principal botanist at the UC-Berkeley herbarium, died May 8 in Albany. She was 83.

Ms. Carter, who was affiliated with the University Herbarium for 61 years, came to UC-Berkeley to study botany in 1928. She began her long association with the herbarium during her senior year when she worked as a plant mounter there.

She made over 5,000 collections from Baja California, described several new species and boasted numerous plant species and genera named after her by other botanists.

Ms. Carter was born in 1907 and raised in Sierra Madre, a small town in Southern California that her grandfather Nathaniel C. Carter founded in 1882. She graduated from UC-Berkeley in 1930 and received her master's degree in botany in 1932.

She is survived by a nephew, Warren Carter of Oak Harbor, Wash.; nieces Margaret Annetta Carter Freeman of Huntington Beach and Mary Lou Carter Powell of Alhambra and her lifetime companion, Florence Mabel Little.

Donations can be made to the California Botanical Society, to be used to establish a fund in Ms. Carter's memory for supporting field work in Baja California.

CAROL HOLLEUFFER

1945 - 1985

On behalf of future scholars, the Regional Oral History Office wishes to thank those who have made possible the completion of the California Women in Botany series. Donors to the project are listed below:

Bristlecone Chapter of the
California Native Plant Society

The California Academy of Sciences

In memory of Carol Holleuffer:

Annetta Carter

Mary DeDecker

Jack Easby

J.E. and Mary M. Hopkins

Charles K. and Vera M. Holleuffer

PREFACE

Traditionally, women have been associated with the study of plants and flowers. When other scientific pursuits were considered too masculine for women to undertake, botany was the one science open to them: "...the objects of its investigation are beautiful and delicate; its pursuits, leading to exercise in the open air, are conducive to health and cheerfulness" (Familiar Lectures in Botany, 1845). In this traditional view, then, botany was the perfect pastime for the "weaker sex."

In fact, women botanists have been strong characters capable of going alone for months in remote areas, subject to disease and hardships that would have defeated most men. They have taken on government agencies to protect endangered flora. They have done the meticulous, dedicated, and sometimes thankless work of keeping herbaria collections. Seldom have they received sufficient recognition, and often they have done their work for little or no pay. The California Women in Botany project was conceived of to tell their stories.

The women selected as the first interviewees in the series are well-suited to illustrate the varied accomplishments of women botanists. The vivid tales of Annetta Carter about her first collecting trip to Baja California with the eighty-year-old Annie Alexander attest to the hardships, and the joys, of life in the field. Mary DeDecker's recounting of her battles to protect the fragile habitat of her beloved desert plants reflects great strength of purpose and fearless, informed persistence. And Elizabeth McClintock's dedicated work for the California Academy of Science herbarium is yet a third aspect of the many contributions of California women botanists.

This series of interviews was conceived of, planned, and executed by Carol Holleuffer, herself a remarkable woman. Carol was a nature lover, a photographer, a conservationist. She combined these interests with a rapport with people of every age and circumstance, a sense of dedicated service, and an adventuresome zest for life that few can match. Tragically inflicted with serious illness in her young adulthood, Carol continued to live life to the fullest and to pursue activities which made a difference.

When diminishing eyesight impinged on her photographic work, she turned to the field of oral history as a means of documenting the world of people in nature. In her characteristic manner, she made sure that she was well-trained in the techniques of oral history interviewing before setting out with her tape recorder. She first worked with the Sierra Club History Committee, conducting two significant oral history interviews of prominent conservationists. Next, she conceived of the idea for a series of interviews with outstanding women botanists, a project which incorporated many of her interests and concerns.

She worked with the Regional Oral History Office to plan the Women in Botany series and to raise funds for processing the tape recorded interviews. Her own work as project director and interviewer was on a volunteer basis. The

three interviews represented in this volume were only the first step in the projected series. Unfortunately, Carol's work was cut short when she succumbed to her illness in July 1985.

The interviews have been completed by the Regional Oral History Office, with generous contributions from friends and family of Carol and from the California Academy of Science and the Bristlecone Chapter of the California Native Plant Society. All of us whose lives were touched by Carol Holleuffer--and we believe that the interviewees represented here would include themselves in this group--hope that this volume of California Women in Botany will serve as a fitting memorial to her.

Ann Lage
Interviewer/Editor

January 14, 1987
Regional Oral History Office
486 The Bancroft Library
University of California, Berkeley

Regional Oral History Office
The Bancroft Library

University of California
Berkeley, California

Women in Botany Project

Annetta Carter

UC HERBARIUM BOTANIST, COLLECTOR AND INTERPRETER OF BAJA CALIFORNIA PLANTS

With an Introduction by
Lincoln Constance

An Interview Conducted by
Carol Holleuffer
in 1985

Annetta Carter, 22 April 1955. Cañon de las Palmas, west side of Cerro Giganta, Baja California Sur, trip with Roxana Ferres and Howard Gulick. *Photograph by Howard Gulick.*

Annetta Carter, Jesus Arias, and Adolfo Garayzar returning from climb of the Cerro Giganta, 26 November 1947. *Photograph by Annie M. Alexander.*

TABLE OF CONTENTS -- Annetta Carter

INTRODUCTION

Annetta Carter was born in the small town of Sierra Madre in pre-metropolitan Los Angeles County in the first decade of this century. Much of her childhood and early youth were spent out of doors in the then-unpolluted and justly famous sunshine of southern California, where she early developed her lifelong interests in natural history, especially plants. These interests, encouraged by family and teachers at Pasadena and elsewhere, led her to Berkeley, where she received a baccalaureate in botany in 1930. Supported by a teaching assistantship, she was enabled to pursue graduate work for two years, securing a Master of Arts degree with a thesis on the aquatic liverwort, Riccia fluitans.

Beginning in the early 1930s, she was gradually absorbed into the staff of the University Herbarium, which she essentially managed for several decades until she chose voluntary retirement from the rank of principal herbarium botanist in 1968. For twenty years (1943-1963) she served as secretary of the editorial board of Madroño, the quarterly publication of the California Botanical Society, which emanated from the herbarium. Herbert Mason, who served both as director of the herbarium and editor-in-chief of Madroño, was a scientist of many original ideas and successive enthusiasms, but with little zest for putting his ideas into publishable form. So Annetta not only served as the person who had major responsibility for seeing Madroño through the press but also the one--sometimes with the assistance of Ethel Crum and Dr. Helen M. Sharsmith--who transformed Mason's rough drafts into skillfully crafted publications.

Appropriately, the eighteenth (1966) volume of Madroño is dedicated to her with a text that reads in part: "...during three administrations the leavening spirit of the University of California Herbarium ... the trusted advisor of faculty and administrative officers, a generous counselor and confidante of successive generations of grateful students, and an esteemed friend to ... associates and herbarium visitors." These descriptions provide only an inadequate clue to the important roles she played and to the hospitable atmosphere she managed to sustain.

The Associates in Tropical Biogeography in February 1947 sponsored an exploratory multi-disciplinary field trip the length of Baja California. The participants were Carl O. Sauer, geographer, Howel Williams, geologist, R. A. Stirton, vertebrate paleontologist, three graduate students, and myself, as botanist. The accounts of our findings and adventures as well as earlier ones by staff and graduate students of the Museum of Vertebrate Zoology, evidently stimulated the interest of Annie M. Alexander, who had already added botany to her long-established enthusiasms for field work in vertebrate paleontology and zoology. In November of 1947, she invited Annetta to accompany her and her companion, Louise Kellogg, on a three-month field trip to Baja California.

In Annetta's words, this was "an expedition that changed the course of my life." Indeed, it marked her entry into the sphere of Mexican botany, in which she has played an outstanding role ever since.

Ira Wiggins, in tracing the history of botanical exploration in Baja California from the 18th century to 1980, states that, "There are two, however, who have been outstanding for having devoted much time and tremendous energy to penetrating areas very difficult of access to pry out information about the flora of Baja California's inhospitable environment. The first is Miss Annetta Carter, who has made scores of trips into the high, jagged parts of the Sierra de la Giganta behind Loreto, into the Cape Region, and to many of the islands along the peninsula shores. She still returns to the Sierra de la Giganta far more often than anyone else I know, and always finds something of intense interest." Two items of intense interest bear her name, the genera Carterothamnus Robinson of the Compositae and Carterella Terrell, the latter an appropriate elevation to generic status of the handsome Bouvardia alexanderae, which Annetta had proposed in 1955.

Part of her field work was supported by the Belvedere Scientific Fund of the Academy of Sciences, of which she was elected a Fellow in the 1950s, and for which she has led several members' field trips in recent years. She served as president of the California Botanical Society in 1965, and she remains an active member of the Biosystematics. Since her retirement, she has enjoyed honorary status as research associate in the University, and is continuing to extend the list of a dozen or so of her publications on Baja California. If her trips by mule into the Sierra de la Giganta are somewhat curtailed these days, her excursions into the study of the materials she collected there over the years show no sign of diminishing. Vaya adelante!

Lincoln Constance
Professor of Botany Emeritus
University of California

6 November 1986
University of California
Berkeley, CA 94720

INTERVIEW HISTORY

Annetta Carter was interviewed by Carol Holleuffer on March 19, 1985, and March 25, 1985. The interview was conducted in the library of the University of California Herbarium, where Ms. Carter has worked for over half a century as student assistant, botanist, administrator, and research associate. Interviewer and interviewee, both outgoing and helpful people with mutual interests in Baja California, quickly developed a close rapport which is evident in the tone and quality of this interview.

Ms. Carter has assisted the California Women in Botany Project immeasurably, not only by sharing her own experiences but also by advising Carol as she planned the project and later applying her editing skills to her own and Mary DeDecker's interview transcripts. She has provided this office with helpful suggestions at every stage of the final processing.

This interview was lightly edited for clarity and accuracy; tapes are on deposit in The Bancroft Library.

Ann Lage
Interviewer-Editor

12 January 1987
Regional Oral History Office
486 The Bancroft Library
University of California at Berkeley

Regional Oral History Office
Room 486 The Bancroft Library

University of California
Berkeley, California 94720

BIOGRAPHICAL INFORMATION

(Please print or write clearly)

Your full name Annetta Mary Carter

Date of birth June 28, 1907 Place of birth Sierra Madre, L.A. Co.

Father's full name Arthur Nathaniel Carter (Deceased, 19

Birthplace Lowell(?), Mass.

Occupation Forest ranger, farmer.

Mother's full name Mary Ida Crandall Carter (Deceased, 1918)

Birthplace Madison, Ohio

Occupation Housewife

Where did you grow up ? Sierra Madre, California

Present community Albany, California

Education Pasadena High School and Junior College, University of California, Berkeley, A.B, 1930, M.A. 1932

Occupation(s) (Obtained High School + Junior College teacher's credentials, but no positions found in early 1930's). Botanist – Univ. California Herbarium Berkeley – first as assistant + later as Principal Herbarium Botanist and Administrator.

Special interests or activities Fine printing on old-fashioned letter press. Conservation of natural habitats & resources

I FAMILY BACKGROUND AND EARLY EXPOSURE TO ECOLOGY

[Interview 1: March 19, 1985]##

Parents' Interest in Outdoors

Holleuffer: It's March 19th, 1985. I'm with Annetta Carter, research associate of the University Herbarium. We're in the University Herbarium Library, a very small room filled with books and rather stuffy in the Life Sciences Building on UC [University of California, Berkeley] campus.

I wanted to start at the very beginning with you, Annetta, and ask where you were born.

Carter: Where I was born? I was born in Sierra Madre, Los Angeles County, California, a little foothill community that was started by my grandfather, Nathaniel C. Carter, in 1882 when he purchased from Lucky Baldwin and from the government quite a bit of acreage which he later subdivided. He ran excursion trains out from Massachusetts. He was sort of a beginning chamber-of-commerce guy. [laughs]

Holleuffer: You mean to settle?

Carter: To settle, yes. I've seen pictures of a train with "Carter Excursions" on it. Anyway, he was able to start this town.

This symbol indicates that a tape or segment of a tape has begun or ended. For a guide to the tapes see page 63.

Holleuffer: Where did he get his money?

Carter: I don't know where; he didn't have very much and land was very cheap then. He had an agency for a Weed sewing machine in Massachusetts, and then, I think, he started a little sewing business that made the first sewing-machine-made American flags. I don't know that he had much money.

Holleuffer: Land was just cheap.

Carter: Yes, land was cheap. It remained cheap as long as any of us owned it, I think. [laughs] Never made a million off of it.

Holleuffer: Your family still has property there?

Carter: No, the last is sold now. My brother had the last and he had a little bit that he subdivided, but it's all gone now. I can still find the house that I was born in, though. Now, instead of having seven acres of nice chaparral around it, there are about a dozen houses on that seven acres. Not the way it was when I was little.

Holleuffer: Well, when you grew up you had lots of country around you.

Carter: Plenty of country around me. My family was very outdoor-oriented, and I had the run of the place. I could go anywhere I wanted. I think I must of even had an early feeling about ecology, because my father and I were looking at a little spot where he had burned brush in the winter when it was wet with rains, and that was the only place where a plant called whispering bells came up, right on that burned area. It was Emmenanthe penduliflora in the Hydrophyllaceae. I've learned later that it's one of the things that's fire responsive; I mean the seeds have to be heat-treated. There was a Ph.D. thesis by Robert Sweeney, later a professor at San Francisco State University, on the effects of fire on chaparral. So I had this early feeling about ecology.

I think I made a grammar school collection of the local plants and illustrated it with a drawing, even a colored drawing, of the Dodecatheon, a shooting star. So I was interested early.

Holleuffer: Was anyone else in your family interested?

Carter: Oh, both my parents were. They were interested in the outdoors. I don't think my brothers evidenced much interest in plants, but they enjoyed the outdoors. My father would sometimes be a summer fire guard back in the San Gabriel Mountains, and we'd go back into the mountains for part of the summer when I was little.

When I was about four, my father and mother took me on an animal trip clear across the San Gabriel Mountains from Sierra Madre to the Mojave Desert. I think we must have been gone three weeks or more on that animal trip.

Holleuffer: By an animal trip you mean you took burros?

Carter: My first burro experience, yes. [laughs] I'm quite sure they were burros, not mules. I have a picture of me on one of them, on a burro. I have a picture of me, on the Mojave Desert sitting in our little campsite, with very chapped lips. I could hardly grin my lips were so chapped.

Women Teachers as Role Models

Holleuffer: What other influences did you have in your early years? Were there schoolteachers who were interested in botany?

Carter: In high school, Pasadena High School, I had the very good fortune of a biology teacher who was a very good teacher and interested in the out-of-doors. I had her as a freshman in high school, I think. Then as a junior in high school I had a botany teacher—at that time they taught botany as a separate course. The biology teacher was Ada Neal, later Ada Neal Burns, who later was on the staff of the American Museum of Natural History in New York. The botany teacher was Ruth Merrill, later Ruth Earl Merrill Jenkinson. She went to India as a teaching missionary the year I graduated from high school, and later she married another missionary, an Englishman. They eventually came to the United States to live and raise their family.

All these teachers really were a big influence on me. They took an interest in me and they became friends. I think they were partly interested because my mother died when I was eleven and I hadn't had much exposure to women; they really meant a great deal to me. So I think that they were my first role models.

Then in junior college, Pasadena Junior College, I had two people, Florence Brubaker and Margaret Stason, who were both graduates of UC Berkeley. They also encouraged me, and I worked for Margaret Stason as a lab assistant after I'd had botany with Florence Brubaker.

All of them remained friends the rest of their lives. Margaret Stason who is in her eighties now, is still alive and

went on a Baja California field trip that I led while she was, oh, probably eighty-one or eighty-two.

Holleuffer: So the student became the teacher.

Carter: Well, more or less.

Holleuffer: It sounds unusual to me to have had all these women who had advanced degrees and were teaching at that time.

Carter: None of them had more than a master's degree. At that time you didn't have to have a Ph.D. to teach in junior college. But both Margaret Stason and Florence Brubaker had master's degrees that they had gotten here from Berkeley. When I came here they both either told me people I should get to know--maybe even gave me letters of introduction, I don't remember--so I had sort of a bridge from junior college to here.

The summer after I'd had Florence Brubaker in her botany course, she was going to UCLA for the summer and encouraged me to go too. I had the good luck to share an apartment with her that summer which was a nice experience for me.

Holleuffer: What age were you then, about eighteen?

Carter: Probably. Let's see, probably eighteen, yes. Eighteen, nineteen. I'd have to do the arithmetic.

II UNIVERSITY OF CALIFORNIA DEPARTMENT OF BOTANY AND HERBARIUM

Botany Faculty, Staff, and Students

Holleuffer: And then you came to Berkeley in what year?

Carter: I graduated from junior college in 1928, came here in the fall of '28. Graduated in '30 and then stayed on and got my master's degree here.

Holleuffer: When you came up to Berkeley how many people were there in your botany class?

Carter: In the senior class at Berkeley there were eight women, no fellows at all. No men. There were men in graduate school, two or three, but in the graduating senior class were eight women.

Holleuffer: Were the teachers then women too?

Carter: No, the only woman on the staff was Lucile Mason. [interruption] There were no women on the Department of Botany staff except Lucile Roush Mason, then Lucile Roush, who was in charge of the freshmen botany labs and was Dr. Richard Holman's right-hand assistant. She should have been an academic professor but at that time there weren't any on the staff. She did get her Ph.D. later and still maintained the position of being in charge of all the freshmen laboratories.

Holleuffer: But she never had a tenured position?

Carter: No. Then later she and Herbert Mason were married and at that time you weren't supposed to have two in the same family on the staff. So there couldn't be two academic people. She later taught at Mills College for a while before she retired. A grand teacher and a good friend to all the students.

Holleuffer: Did you keep up with your fellow students from that time? Do you know what happened to them?

Carter: I know one, Dorothy Tebbe, became a doctor. I kept up with very few of them except Mary Bowerman with whom I'd been in junior college. We came up together and we've been friends ever since. One who worked in the herbarium with me and sort of introduced me to the herbarium work in addition to Mrs. Bracelin's introduction became a teacher [Vivian Giles Weatherhead] in the East Bay school system in El Cerrito. A very successful biology teacher. I still know her, but the others I've lost track of. I have a few ideas on where they are, but I haven't kept in touch.

Holleuffer: When you came up here to take botany what were your expectations of what you would do with the degree? What did you hope to accomplish?

Carter: Well, I expected to get a teaching credential and teach high school and/or junior college. I got both credentials, but I got out at the height of the Depression in '32 and couldn't find any jobs. So, I'd been working in the herbarium and I kept on part-time work in the herbarium, and then gradually it increased to full-time work. I much preferred that to teaching because I wasn't really cut out for teaching. I'd had a miserable time in practice teaching.

Holleuffer: As a student you practiced--

Carter: As a grad student I had practice teaching, and it just about killed me. I don't know how many pounds I lost that year, but it was a low period. Especially the second session, which was, I think, about a fourth level junior high general science class. It was just awful.

Holleuffer: The students were awful or what?

Carter: The students and trying to get the material across. I just wasn't cut out for that. The fact that I was able to work into a position in the herbarium was really a godsend to me and became very satisfying.

Holleuffer: In your student years there was also an undergraduate club here, wasn't there, for people who were interested in botany, called the Calypso Club?

Carter: It was not only undergraduate but graduate too. The faculty also took an active part in it. I think that more graduate students went on trips than undergrads, although a few of us undergrads got to go along. There were weekend field trips in old cars with

good clearance as you saw from the pictures in the Calypso Club album. We'd all pile into two or three cars. The Masons had an old Dodge touring car that was wonderful. They'd even lend it to us sometimes without them being along. So we'd go off in the Mount Hamilton Range and North Coast ranges or Marin County and collect plants and just go and have a good time. Sit around the campfire and sing.

Holleuffer: In the beginning here in the Calypso Club photo album is a description of a trip and the sign-up list, and it's three dollars and fifty cents for the trip. [flipping through it] It's very cheap. [laughter] Bring your own bedroll, that was all that was required.

Carter: We didn't have fancy sleeping bags in those days either. A bedroll was more what it was, just blankets. I know mine was; the blankets covered by an old piece of canvas that I'd brought up from home. But they weren't light, so our gear wasn't light. And we had running boards in those days to tie things onto, which you don't have now.

Holleuffer: This was also an opportunity to start some field identification work?

Carter: Yes. Quite a lot of us were taking Herbert Mason's course in plant taxonomy at that time, so it was an opportunity to do the collecting that one had to do for the course. Now collecting is frowned upon, but at that time it was part of the course to collect a certain number of specimens in different plant families and identify them correctly, label them, learn how to prepare good specimens. That's something that isn't done anymore because of, well, the crunch on the vegetation for one thing.

When I was an undergrad I didn't have much money so I was working part-time. The first year I was here as a junior I had a part-time job in the household science department under Agnes Fay Morgan cutting up prunes and other fruit for the dietary experiments on rats. It happened that in the house where I was living there was a young woman who was working for her doctorate in the household science department, and she got me this job.

Holleuffer: What were you paid for that?

Carter: It may have been twenty-five cents an hour. I know it wasn't as much as fifty cents; that was later in the herbarium.

Holleuffer: And all the prunes you could eat?

Carter: No, I wasn't very hungry for prunes somehow or other. [laughs] There may have been other fruit, but I remember especially the prunes and mixing some of their dietary mixes and things. I don't think I had to clean the cages much; I was spared that.

Holleuffer: What other jobs did you have as a student?

Carter: In my senior year Dr. Holman, professor of plant physiology, suggested that I apply for a position in the herbarium where they needed a mounter. So I did and got the position. My first herbarium job was mounting plants, so I feel I can tell young mounters how it should be done. I went up to the herbarium to be interviewed and the herbarium at that time was on the top floor of the Hearst Mining Building clear at the other end of campus. Mrs. [N. Floy] Bracelin, who we called Bracie, was the one who interviewed me. Dr. [Edwin Bingham] Copeland was then curator of the herbarium. He had turned the interviewing over to Mrs. Bracelin so we had a pleasant interview, and I was hired.

Holleuffer: Was she a trained botanist?

Carter: No she wasn't. She had gotten into botany through meeting Ynes Mexia on field trips (1926).

Holleuffer: With the Calypso Club maybe?

Carter: No, with Harold C. Bryant who was later director of natural history programs in the National Park Service. (At that time Bryant was lecturer and instructor in the UC Extension Division, 1916-1930, and much later superintendent of Grand Canyon National Park.)

Anyway, Harold Bryant was real important later in the National Park Service. He led these field trips. Mrs. Mexia was on those, and Mrs. Bracelin became acquainted with her. Mrs. Mexia was interested in going on field trips and thought that Bracie could help her take care of the material. So in that way she worked into botany. She would have been an excellent botanist--all around botanist--if she'd been able to have gone on to college and been trained, but she picked it up, a tremendous amount. She was a real good herbarium curator and very capable.

Dr. Copeland, after Bracie started working for Mrs. Mexia, put her on the herbarium staff to take some of the load off from him. That worked out very well for her for a number of years.

Holleuffer: You said something, too, about how she used to sing while she was working?

Carter: Yes, she was a very joyous person. I think maybe some of her domestic troubles were covered up by being joyous at work. She had a lovely voice and would sing as she worked. You could hear her voice--when we moved to this building you could hear it through the herbarium. That irritated some of the staff, some of the academic staff.

Guidance and Support of William Albert Setchell

Holleuffer: I was wondering if you could describe some of the other departmental personalities other than Mrs. Bracelin?

Carter: Well, Dr. Copeland, who was curator of the herbarium, was quite a gruff man. He was a specialist on ferns. I got to know him later, but at that time, as a senior, I was quite intimidated by him. One day I was typing labels for his specimens--Brandegee labels they were--and I was typing along "JSB" (that's the way Brandegee's writing looked to me.) Dr. Copeland looked over my shoulder and said, "Any fool would know that was TSB." (Townsend Stith Brandegee, the most important early botanist to work in Baja California.) That really made me feel like going under the table. But later I followed in Brandegee's footsteps in Baja California. Now I have his desk and his revolving bookcase as my own to use here.

I did my master's degree under William Albert Setchell, who'd been chairman of the department since he came to Berkeley from Yale and Harvard in 1895. He remained chairman until 1934, which is a good long stint. He was a large man--not, well, just large all over and he had a booming voice. If you were at one end of the LSB [Life Sciences Building] hall and he was coming out of a room at the other end, and he just spoke naturally, it would boom down the whole hall. When you'd go to consult with him about a problem in your research he would lean back in his big chair. (He had quite a collection of pipes so he always had one pipe or another.) He would lean back and look at you, rather sternly, and then he'd blow big smoke rings that would--. I would follow these good old smoke rings going up the ceiling while he was talking or asking me questions.

He had married late. He had a wonderful wife who preceded him in death a few years, but we got to know her. They would go on extensive field trips, many of them to the South Pacific, and bring back collections. But he was also very fond of the students and had a group that he called his nieces and his nephews all over the world. Many of the students that he'd had,

or professors in other countries, became his nieces and nephews. I had the good fortune to be a niece.

Holleuffer: Was this a formal title that you—did he address you this way?

Carter: No, were just considered—. He'd have gatherings of his nieces and nephews. I think he may have had an informal list of them. We knew we were his nieces and nephews because he'd have us in. Herbert and Lucile Mason were nephew and niece; Lincoln Constance and I, both being contemporaries, were nephew and niece, and botanists all over the world. There were two in New Zealand, both of whom I've met. You'd go to another part of the country, and you'd meet somebody who was a fellow niece or nephew. It was a wonderful relationship.

Holleuffer: Was he very supportive of you in your work?

Carter: Yes.

Holleuffer: Did he encourage you to go for a Ph.D.?

Carter: [pause] He didn't discourage me, but I think I discouraged myself. I think I could have gone on, but I was scared with the possibility of a language exam in German, and I just didn't want to go on. [laughs]

Holleuffer: What languages did you have to have at that time?

Carter: German and French. I didn't have French at all.

Holleuffer: No Latin?

Carter: No, you didn't have to have Latin. Well, Spanish I wouldn't have wanted to use then. The other way that we knew we were nephews and nieces were that we called him "Uncle Bill". I went East—when was it? In 1933. He insisted that I go to visit his sisters in Providence, Rhode Island, so I went there on my way up to Harvard and stayed with them a couple of nights. That was a nice experience, so I came back and brought him news of his sisters and kept in contact with them until they passed on. He was one of the highlights of being a student here at that time.

There were other professors too. Professor [Nathaniel] Gardner, who was the other one working in algae, was a quiet man, a very gentle, quiet man; quite different from [William Albert] Setchell, with whom he collaborated on the very famous marine algae of the Pacific Coast, which really put this institution on the map as a leader in algological studies.

Lecturing and Research Style of Willis Linn Jepson

Holleuffer: What about Willis Linn Jepson, who's been described as the paranoid personality of the herbarium? [laughing]

Carter: Well, I wasn't one of his students, but working in the herbarium and his having the need to consult the herbarium from time to time I got to know him informally. He was always very friendly with me. He could give the most beautiful, inspiring lectures, interesting lectures, but he was very much a recluse in his own office. If he didn't want to see a person he wouldn't see them. He had--well, perhaps Mrs. Dempster (Laura May Dempster, now a research associate in the Jepson Herbarium) will tell you that story when you talk to her--that he gave orders that he wasn't in unless he wanted to be. [chuckles] There is one story of Professor [Ralph] Chaney coming to see him, and Chaney was told that he wasn't in. Chaney didn't believe it, and he was peering through the keyhole and here was Jepson peering through the keyhole in the other direction. [laughter]

He felt that anything to do with the flora of California was his prerogative. No matter how he gained information about the plants of California it was his right to know because the flora of California was his. So anything he did to gain that information was all right in his eyes.

Holleuffer: So there were some underhanded things that went on.

Carter: There were some underhanded things.

Holleuffer: Would you like to describe some of those?

Carter: I don't know that I should put it on record, but I was working on some Alexander and Kellogg collections from the Sweetwater Mountains. I had them all down on the basement floor, and they were spread out where I was working on them. There were some really interesting things. I was working there late one afternoon, and he came along as he usually did after hours. So I was showing him these interesting plants that they'd collected. When I finished with them, we sent the list to Miss Alexander, and she said, "Why I didn't collect this under that number." She had very careful notes and numbered all her collections. So we'd given her a name of something she said wasn't on that collection sheet. We looked at the specimens and discovered that that specimen had been removed and another one put in its place. Later those collections turned up in the Jepson Herbarium, which since then has been curated by Dr. Rimo Bacigalupi and L. R. Heckard. So he just came and helped himself to whatever he

wanted. If there was not enough to split, why he transferred material. He kept the data all right, correct for himself, but he didn't care what was right in what remained because he had what he needed. My fingers were really burned by that experience.

Holleuffer: You didn't show him plants after that?

Carter: I didn't show him any more plants, no.

III UC HERBARIUM COLLECTIONS AND RELATED WORK

William Brewer Collection

Holleuffer: There was also something, as I recall, about the Brewer collection and Dr. Jepson?

Carter: Well, the Brewer collection was a collection of William Brewer, who was on the California State Geological Survey of 1864-65. It came to Berkeley, and it was the nucleus for our university herbarium. With it was a notebook. The specimens weren't labeled; they just had his collection numbers on them. Those are all in the herbarium with his collection numbers, and it just happened that somehow or other Jepson got hold of the notebook, and so it wasn't accessible to the herbarium for labeling the specimens. Not until after some years—I guess it was after his death--we got that notebook, and then we were able to put the labels on these specimens as they turn up in the herbarium. It's just a little slip of paper on the sheet with number, maybe, 465 on it, in pencil, nothing else.

Holleuffer: Absolutely nothing else?

Carter: Nothing else, and an early accession number. One day, one of the graduate students, who was working in the herbarium, came to Miss [Ethel] Crum and said, "Can't we throw this out?" Miss Crum, who was very historical-minded practically went through the ceiling and told this graduate student what it was and how to take care of it when we got the notebook. Now the notebook is available, so whenever those turn up, why we put appropriate labels on them.

Holleuffer: It seems quite amazing that a professor could do these sorts of things--.

Carter: He was a law unto himself. Everything that furthered the flora of California was his prerogative.

Holleuffer: Was there a great deal of rivalry between himself and other professors?

Carter: Well, he was the only one in taxonomy to begin with. Then later, when Professor Mason was put on the staff and began having graduate students, Professor Jepson was quite bitter about it and became rather--not bellicose, but unfair to Mason. They had been friends until Mason began having his own graduate students. That, from Jepson's viewpoint, was inadmissible. That was a source of problems.

Townsend and Katherine Brandegee Collection

Holleuffer: The herbarium was established, as you said, with the collection of Brewer from the 1860s. I guess that was actually in 1872 [1890] it was put aside as an herbarium. It was added to in various years with various collections, but one of the important ones was the Brandegee's collection in 1906, wasn't it?

Carter: Yes.

Holleuffer: How did that come about? How did the herbarium acquire that?

Carter: Well, Mrs. [Katherine Curran] Brandegee was on the staff of the California Academy of Sciences for a number of years and collected all around California. Mr. Brandegee--I don't know when he began collecting. His work in Baja California began in 1899 but he'd been collecting--he'd collected wood samples for one of the eastern institutions, Yale, I think. We'd have to look it up in the biographical sketch that Setchell made, but he had collected some.* Then in 1899 he began working with some of the California Academy of Sciences people in Baja California. He went down with an ornithologist [Walter Bryant] and a mammalogist [Charles Haines] from the academy. They landed at Magdalene Bay. Brandegee traveled north by animal to San Quintin.

---

*In 1875 Townsend Stith Brandegee, a Yale graduate, was appointed assistant topographer and botanical collector with Hayden's Exploring Expedition to southwestern Colorado. Later he made wood collections--tree trunks--for Yale.--A. C., 1986.

##

Carter: So he amassed a sizable collection. He returned from Baja California in 1899, and he and Katherine Curran were married shortly after his return. They moved to San Diego in 1894, and they continued to live there until 1906. Apparently they had several pets; included among the pets was a guinea fowl that Mrs. Brandegee was extremely fond of. I don't know what happened but in our pictures of the Brandegees there's an annotation saying that the guinea fowl disappeared--it got away one day and his letters tell about its disappearance, his not being able to find it and what good care he'd been taking of it. (Mrs. Brandegee was away and he was writing these letters to her.) So, in this annotation for this photograph it says that after the death of this guinea fowl that Kate couldn't bear to live in San Diego any more so they moved. [laughs]

Holleuffer: Devoted to her pet? [laughs]

Carter: And maybe other reasons. Maybe they decided that San Diego was not a good center for botanical activity, but that's what is stated. So they came here in 1906, shipped their material and gave it all to the university with the right of working, having quarters here to work on it.

Holleuffer: They were independently wealthy, then? It was their own collection?

Carter: He was. It was their own collection, yes. In the meantime he had started collecting with C. A. Purpus in Mexico and all of the Purpus things were coming to him too.* That's an extremely important Mexican collection. He identified all those. They continued their work, especially Katherine in California. She was the eminent botanist probably in California at the time.

Holleuffer: And again she was not a trained botanist. She just came to it by doing it.

Carter: By experience, I think so, yes. She was a doctor, a physician, and I think that in those days peoples' medical training had more natural science than they ever do now.

Holleuffer: She also started a magazine, the botanical magazine, didn't she?

---

*For Purpus's Mexican work, see: Sousa, Mario S., Las Colecciones Botanicas de C. A. Purpus en Mexico Perido 1898-1925. Univ. Calif. Publ. Bot. 51: v-36. 1969.

Carter: The name of it is Zoe, yes.* Both of them published in that. There are a lot of interesting articles by others as well. Mr. Brandegee died in 1926, and she'd died two or three years before [1920]. Dr. Mason, who knew her slightly, and knew Mr. Brandegee more, said that she would be so interested in getting up to the herbarium to do her work that sometimes it would look as if she'd come up in a nightgown instead of stopping to get dressed. But this may of just been an illusion because she wore a long skirt that looked sort of like a Hawaiian muumuu, a long dress. Let me show you the pictures of her.

Holleuffer: Did you say that Ann Zwinger is going to be working on a biography of the Brandegees?

Carter: She would like to. Well, she'd like to base it on the letters of T. S. Brandegee. Since she's so fond of the part of Baja California where he did most of his work she's admirably fitted to do this. I hope that she carries it through. She said she has to get the funding, though, to do so. Like everyone else, yes. [laughs]

Purchase Method of Building Collections

Holleuffer: I'm interested in the early collecting because it seems to have been a haphazard thing. There were a lot of professional people out there, and there were a lot of non-professional people. Were collections being bought by various places, is that why these people were making collections?

Carter: Yes. Universities build up most of their collections by exchange just the way stamp collectors exchange. You'd send out sets of material and receive sets back, but in addition there were private people who either did it as a hobby or as a means of gaining some income. The Lemmons, J. G. Lemmon and wife--which is the way his label reads, "J. G. Lemmon and wife" [laughs]--did that. They collected and sold their material. And a number of others would just collect as a business and sell--butterfly collectors did that, too. I don't know whether they still do or

---

*Zoe was first financed by Dr. H. W. Harkness, mycologist and President of the California Academy of Sciences and by Mr. Brandegee; later by Mr. Brandegee alone. cf. Setchell, W. A., Townsend Stith Brandegee and Mary Katherine (Layne) Curran Brandegee, Univ. Calif. Publ. Bot. 13:155-178. 126.

not. Insect collectors. But it was a way of gaining a little bit of money. Specimens didn't bring very much, maybe ten cents a sheet. They're worth a lot more now. There are still collectors who collect and sell their material.

Holleuffer: Today there still are?

Carter: There still are.

Holleuffer: And do herbaria still purchase things?

Carter: Yes.

Holleuffer: How much today would they pay for a sheet?

Carter: Never under a dollar, and sometimes more. But they only buy material from remote areas that have not been collected before. We've bought material from certain parts of Africa. We've bought material from certain parts of South America. Professor Setchell left a fund in the name of his wife [Clara Ball Pearson], and that's used exclusively for buying specimens.

When I was working in the herbarium as an undergrad, people, visitors, would come through. One day, a little tiny bit of a lady, a frail looking lady was visiting and naturally I was curious to know who she was because she was getting equipment for fieldwork, considerable equipment. It turned out she was Mary S. Clemens who was the wife of an army chaplain who was stationed in the Philippine Islands. She'd been collecting in the Philippines and was going back, and they were going to go to Borneo, I think. I think he was about to retire. She wasn't--she must have been in her fifties then--she looked old to me, but I wasn't twenty yet [laughing]. So I was interested, and we began buying these collections from the Philippines and from Borneo.

Harley Bartlett Collection at the University of Michigan

Carter: Then, when I was on loan to the University of Michigan (April-October 1957 and July 1958-January 1959) to process a lot of collections that the director of their botanic garden, Professor Harley Bartlett, had amassed, it fell to me to process her collections from Queensland, Australia. After all these years I had a very intimate connection with her collections. She'd been collecting in New Guinea at the time the Japanese invaded New Guinea in World War II. Her husband had died, and, as they had agreed, she just buried him in the field instead of taking him

back to someplace else. They had a previous agreement if either one died, why, they would just take care of it in the local custom.

So she was evacuated to Queensland in 1941, I think.* She'd barely gotten settled in there before she decided that she would go on collecting. Beginning in 1942 until 1950, on her seventy-seventh birthday, she was collecting, and she sold those collections. She'd collect duplicates; she collected a number of plants that were described as new species. She sold all this material to Professor Bartlett, except for a set which was left in Brisbane, Queensland.

So these sets--there were maybe ten or fifteen sheets per collection number--it was my job to get all these dispersed from the University of Michigan. That was one of the things that I did when I was back taking care of all the other collections that Professor Bartlett had amassed through an energetic lifetime of correspondence and fieldwork. That was the first time that I ever lived outside of California, in 1957-59. It was interesting and I enjoyed it.

Holleuffer: What was different about it? What perspective did it give you?

Carter: Well, the weather mostly. The buildings were so overheated you had to go dressed ready to shed. I remember the first snowstorm; I had a little tiny apartment overlooking the valley. A kid came along with a sled pulling the morning papers, and I could hear the sound of the sled on the snow, which was a new sound to me. Then the sound of the cars spinning their wheels in the snow and the beauty of icicles after an icicle storm. Things like that.

The other thing that I enjoyed, in addition to the work--some of which was rather boring but still I was getting a job done--was the farmers market, which was very active in Ann Arbor, Michigan. Twice a week there was this wonderful farmers market that you could go to and get fresh produce. I'd never seen so many squash as came in in the fall, and different kinds of squash. In addition to being colorful they were delicious. And the friends I made, too, were very, very rewarding.

Holleuffer: Then you came back in 19--?

---

* Mrs. Clemens arrived in Queensland Dec. 31, 1941. Carter, A. M., "The Itinerary of Mary Strong Clemens in Queensland, Australia." Contr. Univ. Mich. Herb. 15:163-169. 1982.

Carter: It was a year's appointment, but I did it in two six-month stretches so as not to be away from here too long. So I was there in two different periods of six months each.

Holleuffer: When you came back here you came back to the herbarium as a--senior botanist? What position--?

Carter: Yes. I was probably a senior botanist then, I don't remember.

Holleuffer: A senior botanist would--what were you doing?

Carter: Well, it was quite a lot of administration, still working with arranging student programs, teaching them how to work in the herbarium.

Field Trips for Herbarium Exchange Program

Holleuffer: You started some early collecting, too? This was before Baja California, around various places in California.

Carter: Oh, yes. When I was first working in the herbarium that was when we were trying to build up our exchange program. Miss Crum--who had begun working in the herbarium in 1933, after having worked with Jepson for a while--she and I would go out on field trips. At that time we would try and collect fifty sheets of each collection number because we had fifty institutions or more on our exchange list. So, in good years we'd go down to the desert and we had a list of things that had been sent out in exchange previously. We tried to get things that hadn't been sent out or else get them either in fruit when they'd been gotten in flower before or get them from a different area. We never eradicated anything in our collecting, but we had some very good field trips doing that.

Holleuffer: How many specimens would you come back with, and how long was your field trip?

Carter: Never more than a week; oftentimes just a long weekend. I think we had a couple of long ones down on the desert.

Editing and Public Information Activities

Carter: Miss Crum was a remarkable person. She'd been educated in classics and--what was it she said? Oh, she'd taught from 1909-1929 in the public schools, and she said that it was "traversing an intellectual desert of the most barren sort." So then she took some courses in botany, got her master's degree in botany, worked for Jepson and helped him on the Flora of California. Did considerable work on that. Then, I think, Dr. Jepson wasn't able to hire anybody anymore, and Dr. Mason, who was the new curator of the herbarium after Dr. Copeland, jumped at the opportunity of putting her on the staff.

She and I had a really good relationship. She was secretary for the California Botanical Society, and then in 1932 Dr. Mason became editor of Madroño, the quarterly journal of the society. So she gave up the secretaryship of the society and became secretary to the editorial board, which position she held for the next ten years. Dr. Mason, who was the editor, paid attention to what articles were accepted and rejected--which is an important function. But Miss Crum was the one who put them into shape for publishing and saw them through the press.

I worked under her and had a real good apprenticeship under her very high ideals of editorship. Dr. Mason's obituary [Madroño 7:33-35. 1943] of her is wonderful; it's something that I always like to have any new editor of Madroño refer to, because it gives an idea of what an editor should do for an author and what the limits of editorship are. She especially thought that young authors should be given, not rough treatment, but help to see that they actually said what they meant to say, and that the titles of the articles would say what they should say.

She passed away in 1943. Then I became secretary to the editorial board. Dr. Mason was editor for, it must have been twenty-seven years, and I was secretary of the editorial board for twenty more years. So by that time I really had my fill of Madroño deadlines and getting it through the press.

Holleuffer: I bet.

Carter: It was an education for me, but I never could have done it if I hadn't had that experience under Miss Crum. So I recommend the article about her to everybody who's to become an editor or even an author.

Holleuffer: How often does Madroño come out?

Carter: Four times a year.

So my experiences, my friendships, in the herbarium, not only with the staff but with the graduate students who were going through, were the rewarding part of the job in addition to feeling that I was doing a little bit for science.

Holleuffer: What will happen with your collections from Baja California, for example? Will they remain here as a research tool?

Carter: Yes. At the moment I have them separate, but they'll all be incorporated in the main herbarium. One of the requisites for collecting in Mexico is that two sets of the collections go to Mexico, one to the National Herbarium at the University of Mexico and the other to Forestales [Instituto Nacional de Forestales, Secretaria de Agricultura y Ganaderia] which is one of the Mexican departments from which you get your permit to collect. But I also send a third one to the herbarium at Polytechnico [Escuela Nacional de Ciencias Biologicas, Instituto Polytechnico Nacional] in Mexico City because they have such a very active collecting program and good botanists there. So three sets, if I have enough sheets, do go to Mexico. I always try to collect at least seven. Then one goes to our National Herbarium [Washington, D. C.], another to Kew in England [Royal Botanical Gardens and Arboretum, Richmond, England] depending upon how many I have. Sometimes I have as many as fifteen sheets of the same species.

Holleuffer: Will they be a discrete collection, or will they be dispersed and you'll have to look them up?

Carter: They'll be dispersed, sure. If a herbarium has a lot of discrete collections it's an awful nuisance. At Paris, at the museum in Paris, you have to know--if you want to work on a certain thing--you have to know who might have collected it. The collections are all kept separate, all these innumerable collections, and it's a terrible headache to go through.

I was checking something also at the herbarium at Madrid, the National Herbarium, one of the early collections by Ruiz and Pavon. So the early collections were brought out for me to see, which was very nice, but it makes a herbarium much less usable to have that arrangement.

Another thing that I enjoyed in the herbarium was the part of public service I did. Sometimes people would just bring in things to know what they were. There was one lady--a senior citizen--who came in more and more frequently. She had a hobby of seeing what weeds were growing on her block. She didn't walk

very well, and she'd just go around her block and watch the weeds that came out. Then she'd want to know what they were, if she'd had trouble identifying them. After she found out what they were, why she'd look up their history, where they came from, who described them. She'd draw them, and she had this little book of the weeds of her block which is really very nice. It was a pleasure working with her.

Later, when Helen Sharsmith was on the staff, she was the one that did most of the public service, and she had her little group of public service friends too, which was rather nice.

Holleuffer: There are sort of herbarium groupies, then, can we call people who come back again and again?

Carter: Yes, it's open to the public. If you want to consult with collections you have to show some evidence of knowing how to consult them and how to handle them. But if you have that knowledge, well, you're more or less turned loose in the herbarium; otherwise you may be taken in and shown how. If you bring specimens in for identification and don't have the ability to do it yourself, well, you get help on it. It used to be more advertised as a function of the herbarium than it is now. The department of agriculture [State of California] refers specimens to us, from their public, and as a result they give us some financial salary help. Therefore, in a way, we are committed. Sometimes the staff members don't realize that we have that obligation.

Holleuffer: [laughs] They're not so receptive to the public?

Carter: Not always, but it is something that should be recognized.

Holleuffer: You mentioned Helen Sharsmith. She wrote the botany of—

Carter: —of the Mount Hamilton Range.

Holleuffer: And also there's one under UC [University of California] Press.

Carter: One of the UC Press series—that's Spring Wildflowers of the San Francisco Bay Region. The Mount Hamilton Flora was her Ph.D thesis [1940]. At that time she was here two or three years, I think. I was on the herbarium staff then, and we would go to Mount Hamilton with her on field trips. Her husband, Carl, would go sometimes but he couldn't always, and we had a lot of really good field trips together. Became fast friends.

Later, when Carl got a position at Washington State College, [Pullman, WA] they were down in the summer. Helen and I went on

a two-week backpack trip in the Sierra from Yosemite around to Devil's Postpile and back, a big circle trip for two weeks, which was really grand.

Holleuffer: What year was that? Can you recall?

Carter: Must have been in upper forties; mid-forties, it was before there were any little Sharsmiths. [laughs] (It was in 1938!)

Holleuffer: What sort of equipment did you take on a trip like that?

Carter: Oh, we were backpacking. We had lightweight sleeping bags and dry food.

Holleuffer: There wasn't very much lightweight equipment then, was there?

Carter: Not too much, but it was all right. We managed all right. We'd sent our second week's food supply to Devil's Postpile, didn't carry two weeks food with us.

Holleuffer: By mule or--?

Carter: It was taken into the rangers, by some route. At the same time, Carl was a summer naturalist in the [National] Park Service, and he knew the way of doing those things. So it was really a great trip. Introduced me to backpacking, which I haven't done as much of since, but I enjoyed it thoroughly.

Holleuffer: It's one way to see the alpine forest.

Carter: Then, some years later, after she and Carl parted company, Helen obtained a position here on the herbarium staff as senior herbarium botanist. So we worked together very happily for as many years as she was here (1950-1969). She retired in '69. She was a very good teacher, and on the field trips she'd teach people how to recognize things. She wouldn't just spout scientific names. She'd point out the characteristics of a flower or a plant to give you a handle on them. She had the hope of leading field trips and being very active after retirement. But, unfortunately, she got Parkinson's disease and couldn't carry out her desires. So it was very sad.

Holleuffer: You mentioned the California Botanical Society which was founded, I believe, in 1913.

Carter: Yes, by Jepson.

Holleuffer: By Jepson, yes. But then there's another plant society which was founded--we don't know the date yet--but--.

Carter: California Native Plant Society (Incorporated, August, 1965). That, I think, grew out of a big fracas that was developing up at the Tilden Botanical Garden [East Bay Regional Park District]. There was, I guess, some move to oust Jim Roof as director, and a group of people rallied around him and became very interested in the native plants. I think that was the nucleus of the Native Plant Society, that group of people that rallied around Jim Roof and kept him there as director. But I think Elizabeth McClintock could tell you a lot more about that, or maybe Alice Howard. I was busy in Baja California and I kept out of that battle. [laughs]

Holleuffer: The California Botanical Society tends to be more professionals.

Carter: It started out with much of the same principles as the Native Plant Society, but then it became more and more full of professional people and less full of non-professional people. It used to have many more field trips; in fact, it used to have lots of field trips, but those have been taken over by the Native Plant Society. The California Botanical Society, I don't think it's had a field trip for several years. Sometimes it would have one a year, but that's even petered out, because the other organization has taken over very successfully on field trips. It's really met a need that was felt that the California Botanical Society fell down on, I think.

Holleuffer: Does the California Botanical Society have chapters throughout the state in the way that the Plant Society has?

Carter: No, just the California Botanical Society. But it has members throughout the state, and it's mostly because of the subscription to Madroño I think. Here in Berkeley we have monthly evening meetings with talks. They also sponsor a graduate student demonstration day once a year that's held at various institutions. This year it's going to be at [University of California] at Davis, and students display their research and give papers on their research. They've even gotten to the point of making a reward to the best paper presented. So they are filling a need with the graduate students, more so than they used to. At first students were afraid to be a member of the Botanical Society, but that's changed and they're much more active now.

Holleuffer: Your position now is research associate, is that the right term?

Carter: Yes.

Holleuffer: Would you explain the difference between the research associate and the research assistant? Because you were a research assistant before, at some point?

Carter: No. I was never a research assistant. A research assistant is somebody who gets paid for helping a professor, being an assistant to a professor. A research associate, as far as I know, is an honorary title with no pay. It usually comes after retirement, or is for a visiting botanist here for a period of time.

Holleuffer: It allows you a place to work?

Carter: It gives me a place to work, use of the library, use of the darkroom and some other privileges too. It's a very nice way to be able to continue your work. You couldn't have it if you weren't actively working on some botanical project. I don't think it would be granted to you unless you kept coming in and doing your thing.

Holleuffer: I wonder, too, about your retirement and your pension. Did you get a pension for all the years that you worked at the herbarium?

Carter: I have a mixed thing. At one atage, the university said that it might pay you to drop part of your university retirement here, state employees retirement. Non-academic employees have a different retirement system from the academic, from the faculty. I was in the non-academic status. So, at that particular point apparently it was advantageous to drop part of that and take social security, which I did. So I get all the state retirement for all the period that I worked for the university but at a reduced amount and also get social security which is not a great deal but it's a help.

Holleuffer: Would it have been much more advantageous to have had a teaching position and get the retirement for that? Is there a big difference between retirements?

Carter: Yes, there's quite a big difference. There wasn't so much then as there is now. But with the new ratings that the reorganization that the herbarium is giving, the top person (which in a way would be what I was when I retired, as principal herbarium botanist,) will be getting a considerable salary.

Holleuffer: Something comparable to a professor, perhaps?

Carter: To a beginning professor. No, even to a step-up professor, I think.

Holleuffer: It seems to me that was a form of discrimination against the herbarium employees in the past in that they were very highly trained and qualified, and yet they didn't get the same sort of pay as people who were working in the teaching position.

Carter: Well, about the time I retired that was changed somewhat because at that time we had more Ph.D.s on the staff. They were feeling very put upon because they were getting so much less than their contemporaries in teaching positions. So the whole setup was changed, and their salary ratings were increased too. But this incoming person who's going to be collections manager--oh, she does have a Ph.D.--but she's going to get, I forget how much it is, but considerably more than anybody would have ever thought such a position would get.

Holleuffer: Do you think it's because of affirmative action and because of people raising their voices and making themselves heard?

Carter: Well, the first big change certainly was because they let it be known they were very unhappy. This current one, I think, is perhaps because there's going to be a considerable change in the herbarium--.

IV BAJA CALIFORNIA FIELD TRIPS WITH ALEXANDER AND KELLOGG

[Interview II: March 19, 1985]##

Annie Alexander, Participant Scientist and Sponsor

Holleuffer: It's March 19th, 1985, and Annetta Carter and I are in the library of the University Herbarium for our second interview.

Annetta, you made your first trip to Baja in 1947, is that correct?

Carter: Yes, right. I object to you saying Baja instead of Baja California. That's one of my pet peeves. [laughs] It's all right. Shall we start over again? Dr. [Ira L.] Wiggins [Stanford University] and I have that as one of our goals in life, to get people to say Baja California, but it's a losing battle; we can't really win on it.

Holleuffer: But actually we should say Baja California Norte and Baja California Sur also.

Carter: You're right, but in 1947 it wasn't divided that way.

Holleuffer: Oh, I see.

Carter: Baja California Sur was just a Territorio in 1947.

I think I should start with a little background of how all this came about. Miss Annie Alexander, who was founder of the Museum of Vertebrate Zoology and the Museum of Paleontology on campus, had been very active collecting mammals for the Museum of Veterbrate Zoology and fossils for the Museum of Paleontology. But, in later years--she'd been born in 1867--she became more interested in plants; it wasn't quite as strenuous as trapping animals. So she became coming into the herbarium in the thirties--. We do have some early herbarium collections that she

made in 1907 on some trips north, but she really began concentrating on plants in the late 1930s. Since about 1907 her traveling companion and friend was Louise Kellogg, so they would come in together with their collections, mostly from southwestern deserts. I got to know them fairly well, and I envied them their trips into the deserts, thought it would be wonderful to go with them. I worked up quite a few of their collections.

In 1947, in February, Dr. [Lincoln] Constance of the Department of Botany staff joined a multidisciplinary group headed by Professor Carl Sauer of Geography. The group had zoologists and the botanist and an anthropologist and a paleontologist and a geologist. They were all supposed to pool their various interests on this trip. So they went to Baja California in February of 1947. I helped Dr. Constance a little bit getting his equipment ready, but he's always good about doing his own footwork so that was just a little bit of help that I gave him.

Then Professor Camp of Paleontology had the idea of a multidisciplinary group going to Africa. We had a botanist, Robert Rodin, from the Department of Botany, a graduate student, scheduled to go as botanist. Well, that was quite a job getting his stuff ready because we had to get boxes and boxes of collecting equipment ready for a year-long expedition. He was supposed to coordinate with the anthropologist on the trip. So I was very much involved in getting that packed and shipped.

Then Miss Alexander had provided funds for another graduate student, Herbert Wagner, to go to the Hawaiian Islands and continue his work in collecting ferns. During the war [World War II] he'd been a navigator on planes flying the blood bank and had become very interested in ferns. With all the many stops of those planes he collected ferns all over the Pacific islands and wanted to go on studying them. So I got his equipment ready to go to the Hawaiian Islands.

By the end of the summer I was pretty disgusted and I thought, "It's not fair. The fellows get to have all the fun of field trips and here I am drudging away, getting their stuff ready for them. It just isn't fair." I was really pretty disgusted with life. Then--I think it must have been early October--Miss Alexander and Miss Kellogg came into the herbarium. They'd come in unannounced, and they'd sort of plant themselves in the middle of the floor and state what they wanted. So they planted, and they said to me--I don't know whether Dr. Mason, who was director then, was there or not--they said, "We want to go to Baja California, and we want you to go with us."

Holleuffer: How wonderful! [laughter]

Carter: So that was sort of a wonderful blow because I'd really wanted to go in the field with them. They collected beautiful specimens, and I admired their work.

Dr. Mason gave his permission, and it was a three-month trip, which was just out of this world for me. I went on herbarium time--well, Miss Alexander paid all the expenses.

Holleuffer: Was she wealthy?

Carter: She was of the Alexander, Baldwin, Cooke families of the Hawaiian Islands, a big sugar plantation.

Holleuffer: Oh, the Cookes, oh.

Carter: And she was independently wealthy and very generous, doing with her money things that she felt would contribute to science. There's a complete biography of her up there [pointing to a shelf in the room] that Mrs. [Hilda] Grinnell wrote that's very interesting.

She had purchased a Dodge Power Wagon, which was one of the first civilian models of the World War II weapons carrier, a pickup. She had a very sturdy metal cage built on the pickup body with a solid roof, heavy canvas side curtains. This solid roof had a railing around it so that we could put light stuff up there. It had a canvas over all that, on account of dust on Baja California roads at that time. It was quite a job getting equipment prepared for three months. She had two fifty-gallon drums for gas which weighted it down a little bit, and I think, in addition, three or four jeep cans for gas and four jeep cans for water. The fellows in the Museum of Vertebrate Zoology had been to Baja California before that, and they gave her a lot of advice, quite a lot of advice. [chuckles] So we were all supplied with these things. In fact, we came back with a little bit of the original gas in one of those fifty-gallon drums because we were able to buy gas along the way, which we carefully filtered.

Do you just want me to go ahead talking? Or do you have some questions now?

Materials, Provisions, and Language Preparedness

Holleuffer: I guess one of the things that I was going to ask about was the sort of preparation, which you've already described some of, and the purpose of the trip.

Carter: The purpose of the trip was just because she was an adventurous soul. She wanted to contribute something to the knowledge of botany of Baja California, and she just wanted to go. She'd pretty well covered the deserts of the Southwest and some of the mountains on the east side of the Sierra, Sweetwater Mountains and places like that. Some of the museum people, Museum of Vertebrate Zoology people, would come back telling her interesting tales of Baja California and she wanted to see it.

Holleuffer: Were there stories at that time about the strange and exotic plants?

Carter: Oh, yes. I had read quite a lot about them. A friend and I used to pore over the report of the botanist [E. A. Goldman]* who went on the 1906 expedition. So I was all ready to go to Baja California at the drop of a hat, but I'd never had the chance.

Holleuffer: In terms of preparations for your collecting, what sort of things did you have to bring with you?

Carter: Well, we had to bring plenty of presses, blotters, newspaper stock, and press frames. We didn't have any pickling stuff for pickled material. That was about it, just drying equipment, pick, pruning shears. Mostly it was our provisions: we carried a lot of food and plenty of water, not knowing just what we'd find. In fact we took more than we needed, but that was before there was any highway and going was slow.

Holleuffer: That was also before dehydrated food.

Carter: It was before dehydrated food, too, so we took rice and not a great deal of canned goods; I think they tossed in some, as I'll tell you about later but—. She [Alexander] took along mate which was an Argentinian tea which she was addicted to at that time. We usually had something to drink before dinner. And Miss Alexander was the photographer for the trip.

---

*Nelson, E. W., "Lower California and Its Natural Resources," Memoirs, Nat. Acad. Sci., 16: 1-194. 1921. Goldman , E. A., Plant Records of an Expedition to Baja California. Contr. U. S. Nat. Herb. viii 371. 1916.

Holleuffer: It was also before instant coffee was popular. That only came after the Second World War.

Carter: I forget whether we drank coffer or just mate. I wasn't addicted to coffee. I know Señorita Luisa, as I got to call Miss Kellogg, liked her coffee muy caliente y negro [very hot and black] [laughing] especially muy caliente. But that was in a restaurant.

Holleuffer: Where did you learn your Spanish for the trip?

Carter: I didn't have much on that trip. I'd had high school Spanish for two years, but that had been twenty years before and you can imagine how much was left.

Holleuffer: Was it learn as you go?

Carter: I tried to review a little bit but it wasn't too helpful. I learned that you should ask questions in a certain way so that the reply would have to be something besides si or no. [laughs] In other words you'd say, "Where does this road go?" instead of, "Does this road go—?" It was a help.

Holleuffer: Did either of the women know Spanish?

Carter: Señorita Luisa had a reading knowledge of Spanish but neither of them had as much speaking knowledge as I.

Holleuffer: I can see the three of you went off—[laughing]

Carter: The three of us went off like that. [laughs] But I did review a little bit and some of it came back. Some years later Don Felipe [Felipe Murillo], who was our wonderful first guide in Loreto, said to me, "Either you've got to learn to speak Spanish better or I've got to learn to speak English." So I began going to night school and after about two years, I guess, of struggling along—.

Holleuffer: Was this Berkeley High School?

Carter: Yes, Berkeley High night school, and that helped. Then later I began to live with a family in Loreto, a Mexican Loreto family, and that helped. I could understand everything but the jokes—they went too fast—or when they'd be talking too fast.

Holleuffer: Can you recall at this point what your expectations were when you went to Baja? Did the trip vary greatly from your expectations? Were your first impressions very different from what you had expected?

Carter: I didn't have many ideas of what Mexican towns and villages would be like, but I thought that the whole peninsula would be more arid than it is, that there wouldn't be as much dense vegetation as you see after a rain. So it was much more heavily vegetated than I had expected.

I think my first impressions of a Mexican town were brought out our first night in Mexico. In Ensenada we were in a little motel--that I think Señorita Luisa and I stayed at once more and then it disappeared. In the night, there were all these sounds of dogs barking and cats fighting and chickens, roosters crowing. Later I thought it would be fun to have a tape recorder and tape the sounds of a little Mexican town that hadn't become modernized, so to speak. I just loved those sounds.

Holleuffer: I'm very familiar with this. [laughs]

Carter: I've heard them in La Paz, too, in the earlier days in La Paz. But not now.

So we were really pretty well equipped for the trip, over-equipped in a way. I spent quite a few hours with a mechanic in our garage learning to troubleshoot on a car. Luckily, I didn't have to use any of that knowledge, but I did have a fair feeling of ability to find whether it was a fuel pump or something else that was giving us trouble. [laughs]

Holleuffer: That's quite advanced for the time, a lady mechanic.

Carter: Anyway, I didn't have to use those things. We only used the winch on the front of the truck to help other people; we never had to use it to pull ourselves out of anything. The men would gather around and admire this winch and think it was a wonderful thing--which it was.

Holleuffer: On this trip you went the entire length of the peninsula on the old roads?

Carter: Yes.

Holleuffer: Over a period of several months?

Trip Log--Traveling, Collecting and Camping Experiences

Carter: The whole trip, the round trip, was three months. Our first night was in Ensenada, and then we got into jeans and felt a

little more ready to cope with the world. South of Santo Tomás, the graded road ran out just a few miles, maybe five miles south of Santo Tomás. It was graded before that for a ways, then there was just a track.

So that second night we spent at the Hamilton Ranch, which, at the time, was a popular hunting headquarters. People would fly down in little planes for hunting quail. Hattie Hamilton was no longer there and I've forgotten the names of the very attractive woman [Margot Parodi] who was then running it, but she served wonderful meals and had some little cottages where you could stay. That was before we really took off.

So the next day we took off, had trouble with the sand dunes in the San Quintín Valley. At that time there was no development at all in the San Quintín Valley. Now, it's purely agriculture and little towns. I think there are two or three little ranches in that whole San Quintín Plain. So it was a very different thing from what it is now.

Holleuffer: About how many miles would you make in a day?

Carter: Usually we didn't make more than fifty, quite often less, collecting and traveling. But when we got to Cataviña that was the fourth day, I think, and we'd only gone two hundred and forty miles by the fourth day. One of the days was quite a distance--I think that's right.

Miss Kellogg and I, Señorita Luisa and I, had a driving schedule. We'd get up at dawn--this developed very early--and finally get going after cooking breakfast and getting the truck loaded again. We'd get going and she'd drive in the morning. Then, if we'd collected during the previous day, at noon we'd spread out all the blotters to dry in the sun. (We didn't carry equipment for drying them artificially, which saves time but I don't like it, doesn't turn out such good specimens.) So we'd spread out all the driers, let them warm, eat lunch, pick them up and put them in--it's good bending exercise--and then we'd be on our way in the early afternoon with me driving.

About an hour before dusk, why we would start looking for a place to camp. In those days it was easy to get off the road; now it isn't with shoulders and narrow roads and very few places comparatively speaking that you can get off. There were four days that we didn't see any other car. One day we saw four cars and that was the maximum that we ever saw in one day.

Holleuffer: Were any of the others groups of women traveling?

Carter: No, we were it. [laughs]

Holleuffer: Did people comment as they stopped to talk with you, "What are you women doing down here?"

Carter: I don't remember whether they did or not. I think we met one other pair of gringos, once. They may have, but the Mexicans are—they may have wondered but they didn't ask.

Carter: Miss Alexander didn't like to camp near a pueblo, or a ranch. She liked her privacy, and so we would usually camp away from places. On that part of the trip this cut down communication. I know once or twice we were camped near ranchos or pueblos and people would gather around, and she became quite unhappy about it. But it worked out pretty well on that score. I would have liked to have had a little more contact with the people but maybe my Spanish wasn't up to it. They would always be entertained when I was blowing up my air mattress. That was a big event. We let them bounce on it, let the kids bounce on the air mattress and they thought that was great. I'm not sure whether they [Alexander and Kellogg] had air mattresses or not--I had one but I didn't always blow it up. Or sometimes I could leave it blown up and put it on top of the truck and not have to blow it again, which was a saving of effort.

Holleuffer: As you went along in the truck, did you also take some side trips by burro occasionally to get into the mountains?

Carter: Not at the first, of the first part of the trip. We took one side trip on the way south, to Bahía de Los Angeles, stayed two or three days there. But when we got to Santa Rosalía after a week and a half, I think it was, Miss Alexander was thinking about getting up into the mountains.

Nobody at that time could get into Santa Rosalía without meeting the Australia dentist, Dr. McKinnon, who was sort of a greeter for people from other parts of the world. He had a dental practice in Santa Rosalía, had been there a number of years and just liked to talk to visitors.

So he told us about the Cerro Giganta, which is the big peak outside of Loreto. He told us that in Loreto we could have a very respectable guide if we contacted Señor Felipe Murillo. He offered to send a telegram to Felipe so that when we got there there would be some introduction. Introductions are very important, and also so that Felipe could start looking for some animals. So he sent off this telegram. Unfortunately the telegram said tres Americanos. [laughing] So when tres

Americanas appeared it was a little shock to the village, but they bore up pretty well.

It was interesting, at that time, about the only truck of the kind that we had was the one that Erle Stanley Gardner had been in two years before. It was [an] exact replica of ours and he had caused quite a sensation in Loreto. [laughs] If a man upon a mule came down the street, the mule would immediately start bucking and going into all sorts of cavorting. So the rider would have fun to show off his ability of controlling it, and little kids would run into their house and then peer at you through the window. It was a real novelty to have this big truck and three women in it, so we caused sort of a sensation in Loreto on that first trip.

After we arrived and arranged for Don Felipe to get animals and guides to go to Cerro Giganta, the biggest peak in that part of the peninsula, we learned that it was going to take him two or three days to get animals. So we got into the truck and went south of Loreto. There was just a track south where the highway now goes. We got as far as Notrí where there's a trail which goes into the mountains.

We didn't know it at that time but later I was on it and learned that it was the same trail that Steinbeck took when he was describing his stay in Loreto. He and his party went up to La Victoria where there's a lovely little hanging valley, went up there on a sheep hunting trip. He has a wonderful account of their stay there.

Holleuffer: Is that in the--?

Carter: That's in The Log from the Sea of Cortez, yes. Later I got to know that little hanging valley quite well.

Then we camped at Notrí; a ranch was there and a man gave us permission to camp. The next day we thought we'd go a little bit farther south towards Puerto Escondido. The road led up over a ridge. We got to the top of the ridge on this tiny track and here were some stones in the middle of the road, said No pase con carro [Not passable by car]. [laughs] So that was the end of that road, and we hiked down the other side on a real zig-zaggy trail down to the little bay on the other side, Bahía de Chuenque where the village of Juncalito is. Now there is a playa accesso [accessible beach] for the public and a quite large fishing village and people in trailers cluttering it up.

But we went swimming there as soon as we'd gotten down this rough trail. That was my first experience with the tropical colored fish that would swim all around. I had a lot of fun.

Holleuffer: Did you wear a snorkel and a goggle?

Carter: No, not then. Not till later. So we got back to Loreto and Felipe was ready for us with two other men, Jesus Arias and Adolfo Garayzar.

Holleuffer: Now, again, how did you communicate with them?

Carter: Apparently my Spanish was enough to--I don't know. I can't remember now that--I apparently had picked up enough, and I had reviewed some. But Don Felipe told me later that I always came with, as he said in Spanish, a very heavy tongue. It would take me two or three days to limber up my tongue.

But anyway, we arranged and managed somehow or other. [laughs] We drove about seventeen miles north of Loreto to San Bruno and then seven miles west along the mesa to where we left the car. This took most of the afternoon. Felipe had arranged to have somebody stay with it while it was there, more or less abandoned but definitely off the road. We camped there that night. About seven the next morning, Jesús and Adolfo arrived with animals (two horses, four mules and five small pack burros). It was about a six hour ride on the animals up to the north, a big basin on the north side of the Cerro Giganta. We camped at a deserted cattle and goat ranch, at about two thousand feet elevation on the north side of this huge basin.

Discovery of Acacia Kelloggiana

Carter: We were there Thanksgiving week of November '47. The first week we collected around in the basin and explored there. There was a real good water spring about a mile up one side of the basin, so we had ample good water. Then, one morning at dawn, Jesús, Adolfo and I, with packs on our backs, started for the top of the peak. It was really a rugged climb. Jesús was just like a mountain goat. He'd go along--there're no trails--he'd find a sort of ledge at the base of a cantil, a cliff, and go along it and then climb up through a little opening and get up onto another little ledge. So we went, but the vegetation was no help. There was an Acacia with horrible hooked spines. It just tore us to pieces.

[brief interruption]

Well, this Acacia was just horrible; it just clawed at you. Horrible, hooked spines and very stiff and unhelpful, and there were other spiny things too but that was the worst. I collected the Acacia in fruit--it was way past its flowering. I don't know how many times I've gone back to get it in flower. Apparently it flowered right away the first rains in August. I had tried and tried and finally, in 1971, I got it in flower and was able to describe it as a new species and name it for Miss Kellogg, Acacia kelloggiana, which I was very pleased to be able to do.

Holleuffer: A completely new species of Acacia?

Carter: Yes. Imagine barging into the genus Acacia but a specialist on legumes [Velva Rudd] collaborated with me on it. Roxie [Roxana Ferris of Dudley Herbarium, Stanford University] and I were going to do it, but she passed away before we got it done. I was real pleased to be able to name that for Miss Kellogg, Señorita Luisa.

We finally got up on top and there was a sort of a long sloping crest--not the main peak but a slope that ran up to it, sort of an upland sloping plateau. There was tall grass, there were oaks, and there was a tree lily, a Nolina, up there which is very picturesque, that was supposed to just be in the Cape Region.

And these oaks were supposed to be only in the Cape Region mountains. Standing up among the grass were a doe and a couple of fawns--and Jesús, who the day before had brought a deer into camp for us to eat, knew that there was no chance of shooting it up there. He just said, "Que bonito," [How beautiful] very quietly, just stood and admired it and thought that was the place where it should be.

We did get clear up to the peak, which is sort of a little granitic outcrop on top of this very much vulcanized mountain. All these cliffs had been basalt flows, but apparently the peak was above those. Either they'd worn away or something--I should have had more geology, should now have had more geology than I did then. And from there you could see the Pacific and you could see the Mexican mainland. It was beautiful. So we spent a little time up there and returned down the slope and then made camp at the place we had left our packs. Did quite a lot of collecting. But in the night a horrible wind came up, just a--practically a hurricane. When we were having dinner--we just carried one or two canned things and some of the galletas marineras [sea biscuits], which are made for the fishermen. Real good--have you had those?

Holleuffer: No.

Carter: They're just like a little round biscuit, hard as a rock. They're real good to carry in your pocket and munch on when you get starved and to dunk into your coffee or whatever.

Anyway, we're having our supper and opened this can thinking it was going to be tuna--and it was an unlabeled can which Miss Alexander and Miss Kellogg had put in from their store at home--and it turned out to be caviar. [laughs]

Holleuffer: Oh, my goodness! [laughs]

Carter: First time ever I had caviar. Anyway, that and coffee were our dinner.

Holleuffer: Pretty rich dinner! What did the vaqueros [cowboys] eat?

Carter: That.

Holleuffer: They ate caviar too? [laughing]

Carter: Yes, I think they probably had some dates to chew on. Dates are a standard thing to carry with you, in date season. They probably did have those. We didn't starve. I forget what we had for breakfast. I know we had coffee. But, this wind was blowing; we couldn't have a fire in the morning, so we couldn't have had coffee. They made the coffee--each one had a granite cup and they put a little of the ground coffee and boil it up right in the cup and then let it settle a little bit.

We tried collecting, but it took six hands to put things in press. It was just a terrific wind, a north wind and cold as the dickens. So we finally gave up and started down. It took us most of the day to get down.

##

Adventures of Three Women Without Fear

Carter: So then we got back to Loreto. Don Felipe was--well, all three of the men were just wonderful. Jesús was about my age and he had a family of six children then; it kept increasing. He lived on a little ranch, a goat ranch, out in the hills. Adolfo lived in town. But Jesús was the one like a mountain goat and I now know his grandchildren in Loreto. He's since died, and so has

Adolfo. But Don Felipe was such a gentleman, and he was so solicitous of Miss Alexander. He'd make sure, with his machete, that he'd whacked off all over-hanging branches. Just wonderful, just great care, if the two of them went clambering around. Why, in fact the two days that I was up the Giganta he'd just followed every step to make sure that nothing happened to them, they didn't bump into any rattlesnakes or anything. Miss Alexander looked so frail; she wasn't, but she looked frail.

Holleuffer: How old were they?

Carter: Well, Miss Alexander had her eightieth birthday the next month.

Holleuffer: My goodness! [laughter]

Carter: I guess Señorita Luisa was sixty-eight.

Holleuffer: Well, no wonder he was solicitous.

Carter: Miss Alexander looked frail but she wasn't really. They'd use walking sticks, as a third leg which was, on that rough country, really good.

Holleuffer: They were quite intrepid, then, to go off by mules and into the mountains--.

Carter: Yes, they were. [laughs] In fact, there was a children's book written about Baja California called Three Without Fear. [It was] about three children who went up the peninsula and it had come out about the time of our trip. So, when I wrote up the article for the California Monthly we called it "Tres Mujeres Sin Miedo" [Three Women Without Fear]. That's where we got that title: we were asked weren't we afraid and so forth.

Then we started out to go on farther south. At that time you couldn't go from Loreto right south, and you had to backtrack almost to Concepción Bay and go through Comondú. So we got to Comondú and it was another subtropical oasis, just like San Ignacio. We came upon an edge of a mesa and here was this long valley full of palms and papayas and things and a zig-zaggy road going down it. I've forgotten to say that after San Ignacio we came to the grade that was then called Cuesta del Infierno, or the little infernal grade. It zig-zagged down this precipice and it was definitely one-way. You hoped you wouldn't meet anybody on it. Now we had come to a similar shorter road that went from the mesa down to Comondú.

So we, somehow or other, got permission to camp at least one night in an orchard in a huerta [garden] of a resident of

Comondú. A little boy came by in the morning with his slingshot wanting to kill birds, which I sort of objected to, but that's a favorite little boy pastime in Baja California. Later I would tell a little boy in Loreto that they have their right to live too. [laughs] "Ellos tienen su derecho" [they have their right].

The next day we camped in the arroyo [gully] southwest of Comondú after having a very pleasant time there. There were clouds gathering over the mountains, and I was a little concerned because we were right in the arroyo bed. I thought that wasn't a good place to be, but it wasn't the storm season and so I didn't worry about it too much.

But I was sitting up, writing my notes by the light of the Coleman lantern--Señorita Luisa and Miss Alexander, I guess were sound asleep--and I heard a little rustling. I looked up and here was a huge rattler coming right through the camp, just a great big fellow. So luckily a long-handled shovel was sitting nearby, and I didn't like him right in camp so I took the long-handled shovel and chopped off his head. That took care of that. I think I put him in the place where we'd had the fire, and next morning I told them what happened. They said, "We thought we'd heard a little commotion in the night." [laughs] I didn't sleep very well that night because I thought, "Well, maybe another one will be coming along."

Holleuffer: Where there's one there's two? [laughs]

Carter: Well, I kept thinking that, plus the clouds over the mountains.

For the next two or three nights I put up my army cot and slept off the ground. But I soon went back to the ground again: it was too much trouble to put up the cot.

Holleuffer: The other two ladies slept out in the—.

Carter: Yes. Once in a while they'd put up their tent if we had a threatening rain or a cold wind. I know in the cirio country we'd had a storm threatening and a cold wind and they'd put up the tent. I rigged up some sort of shelter that kept some of the rain off from me. But nearly always we just slept right out.

Holleuffer: What was the attitude of the guides that you had? Did they understand what you were doing collecting plants? Did you ever explain it to them or did they just think that you were crazy Americans?

Carter: No. You'd ask them about the uses of the plant so they would think that you were collecting medicinal plants. That always is a help. But I wasn't able to explain at that time, but they accepted us apparently very well. They did have this feeling of medicinal plants. Later, when I was doing quite a lot of taping, the idea became quite firmly implanted that I wanted to know about the uses. Then they would want to know if I had them analyzed, which I did in a few cases. But apparently we were pretty well accepted.

So we got to La Paz on December 8th, a little over a month from the time we'd left Ensenada with the side trips and the week trip up into Cerro Giganta. At that time La Paz still had cobbled streets--no paved streets at all--and you can imagine how the truck bumped over those cobbled streets. [laughs] We stayed at the Hotel Perla which was the hotel then and about a fourth the size it is now. It had a back yard, a courtyard, where we could keep the truck and where I could dry blotters. We were there two or three nights before we sort of gathered ourselves together, got ourselves cleaned up and ready to start on the next leg of the trip around the cape.

One evening there was a knock at the door, and a woman came and introduced herself, Margaret Waters. She was a freelance writer and she wanted to write up these intrepid women. So Miss Alexander was gracious and talked with her. That was the beginning of a friendship that I have until now with Margaret Waters. She lived there for, oh, another ten years, I think, in La Paz. Her husband did leave her, so she acted as a bilingual secretary to Señor Rufo of the Rufo store, La Perla de La Paz, and taught English to Mexicans and had a very good life there.

Holleuffer: Where did she write up the story?

Carter: I don't know where that one did appear, but she was at that time a contributor to the editorial page or the sort of essay page of the Monitor, the Christian Science Monitor, and several things appeared in there. I don't know where that story did appear. Maybe it never got published, but she did write it up and she has written some others that I've read since.

So Miss Kellogg and Miss Alexander wanted to go around the Cape and then go up into the mountains south of La Paz, up into Sierra de Laguna. But first we made a trip around the Cape.

One day between San José del Cabo and Cabo San Lucas the collecting was so good--the rains had been so good--that we only made ten miles that day, just collecting, collecting. I think that was one of the times when our stack of blotters, our presses

with plants in them would have reached six feet if they had been piled on top of each other.

We found a place to camp right back of the ocean at the tip of the cape and a wind came up. We were behind some little coastal shrubs that protected us some, but it was sort of a mean wind and the sand was blowing in our food. Suddenly Miss Alexander began to chortle and she said, "I wonder what our wealthy friends would think if they could see us now." And she and Miss Kellogg just went into gales of laughter [laughing] because they were both very well-off and their friends--.

Holleuffer: Millions, I suppose they had.

Carter: Probably. I'm not sure that Miss Kellogg did, but she was adequately taken care of. Miss Alexander was wealthy, and their friends weren't accustomed to this kind of life. So they really had a good chortle over that.

We returned to La Paz before going to Todos Santos. We'd been told of a man in Todos Santos who could help us: we got to know some businessmen in La Paz who gave us good advice. We went to the proper person in Todos Santos and he told us where to go to a ranch at the Sierra de Laguna, Rancho La Burrera. (I still can't trill my r's.) We got animals there from Trinidad Castillo and he went up with us.

It was Christmas week and cold, and we were up there about a week. The guides, Trinidad and his friend, were afraid of skunks, zorillos, with rabies, la rabia, and he told us lots of tales about that. In the morning it got down to freezing. I know one morning, maybe it was Christmas morning, Miss Alexander was brushing her teeth and a thin film of ice formed over the cup while she was washing her teeth, so it was cool. [laughs]

Holleuffer: How did you celebrate Christmas?

Carter: We went on a nice hike to a peak called La Aguja which is the highest peak in that area overlooking Todos Santos. We found some interesting things. The collecting up there was really good. We never did find a little composite, a little plant in the sunflower family [Faxonia pusilla] that was collected by Brandegee on one of his trips there. It's never been re-collected since, and people have been looking for it.

Holleuffer: Did you have, then, certain specific plants in mind that you were looking for that hadn't been found?

Carter: Not in general. We had a few but mostly collecting hadn't been done much so we were collecting everything that was in good condition. Tried not to re-collect the same things but it was all so new to us, we just collected everything. Since then collecting along the highway has been discouraged because it's the same thing that everybody collects. But we got into these offbeat places, so collecting was really worthwhile.

Holleuffer: You're known for your offbeat collections. [laughs]

Carter: I guess so. [laughs]

Holleuffer: —if I may say so.

Carter: Did you see what Dr. Wiggins said about me in The Flora of Baja California?

Holleuffer: No.

Carter: I have to show it to you. He was describing the collectors and mentioned Reid Moran of San Diego Natural History Museum and me as the recent ones who have added to the knowledge of the flora.

But on that first trip, I think to the north side of Cerro Giganta, I got an Abutilon in the Mallow family that was described as new; later it was reduced to another species that was in the Cape Region but it looked very distinctive. So it was called Abutilon carterae.

So we came down from La Laguna, a part of the Victoria Mountains, on the 29th of December. That evening I discovered that had been Miss Alexander's eightieth birthday. They'd kept it secret. But we got down and I'd left a whole stack of plants with the senora of the rancho at La Burrera to change blotters for me. I'd given her, I thought, careful instructions to take the blotters out and spread them and then put them back among the plants, but unfortunately I discovered, when I was going through them that night, she had not only spread the blotters out but she had spread the plants out and the wind had come. So things were pretty well scrambled. Luckily my notes were adequate, and some of the plants had left stains on the sheets. I don't know how many hours I spent in the tent that night with a Coleman lantern unscrambling those collections. But I think I made it all right.

So we got back to La Paz, and a businessman there that we'd gotten to know suggested that we fly home and let somebody else drive the truck. Miss Alexander said, "No." So we started back again on the first of January [1948], started north. I think it was that first night, maybe the second night out on the Llanos de

Magdalena, it was cold--it got down to 22 degrees that night, and the afternoon it was up to 92 degrees. Terrific range of temperature. There was lots of firewood and we built a cooking fire and then another fire back of us to keep us warm while we were cooking supper.

On the way back Miss Alexander wanted to go back to Bahía de Los Angeles again, so we made a side trip out there but it took us, I think, a little more than four weeks to get back because we had this side trip. And you just didn't travel fast on those roads.

Holleuffer: Did you have many breakdowns and flat tires?

Carter: Didn't have one. On the way back, instead of following the road along Concepción Bay from La Purísima we went along the Pacific side where the Baja California--"Baja One Thousand" I'd suppose you'd say--races have been held in later years because it got the racers away from the paved road and the better known road. That was just a track at that time. At one place we had to widen the road; it was a narrow canyon and the truck wouldn't fit, and we had to widen it some.

Holleuffer: You had shovels with you?

Carter: Oh, yes, we had long-handled shovels. In another place the road had been gullied so that we had one wheel on one side of the gully and the other wheel on the other side and you didn't know when the gully was going to change. [laughs] We saw a little boy come riding along the mesa on a burro. He had two sombreros on his head, his old sombrero and his new sombrero. He had just come in from San Ignacio with a supply of probably sugar and other staple foods. The road wasn't very plain at that point so we went to the ranch with him, and the next morning he guided us back to the road we should have been on. We got into San Ignacio later that day.

I know we were going up one ridge on a road that was perfectly visible. I was driving and got to the top of the ridge and at the top of the ridge the road parted, so I stopped, trying to decide which half to take, right or left. I guess Miss Alexander was getting a little tired: it was the afternoon. She said, "Well, make up your mind." So I plunged down the right hand, and at the bottom a little ways farther down they both came together, which is typical of many such choices. It certainly was true on Laguna Chapala; you'd have half a dozen choices.

Holleuffer: That all end at the same place?

Carter: All end at the same place. At least with us they all always ended at the same place. So that was the first trip, three months and few days.

It changed my whole life because as we left La Paz on January first I made a New Year's resolution which I've almost kept, to go back every year. I was just checking and--where is it--in 1949 I went down. Margaret Waters wrote me and said they'd had excellent rains in March, that the Cape Region was just a flower garden. So I flew down by--there was no line up and down the peninsula then except a freight line. I got on a plane in Tijuana--there was just a little tiny shack at the airport there--and got aboard a DC-3.

Carter: The woman sitting across from me, as we were about to take off, crossed herself and then offered me a drink--I guess it was tequila--and she said, "The first time you've ever flown? And on a Mexican plane! I know the dangers." [laughter] And it turned out she was the wife of the pilot who flew the freight plane up and down the peninsula. She was the one in the office, dispatcher and things like that. She was going over to Mazatlán to make some arrangements. So that was my first flight.

We went to Mazatlán and I got off there and then got another plane to La Paz and met Margaret and Don Waters who had a jeep, and we got out in the field. On that trip I collected a Bouvardia which I was able to name for Miss Alexander, a new species. So then I kept going every year.

Holleuffer: How were these trips sponsored?

Carter: I was going to get to that in a little bit. I'll just do this and then--. I've skipped 1954 because Miss Kellogg wanted to go to Sevilla where her sister had lived. I skipped 1956 and 1957 because I was on loan to the University of Michigan and there's something interesting I can tell about that later. I skipped 1968 because I went east to study type specimens of Baja California, and I retired in '68. Nineteen seventy-six I didn't have any Baja California trips for collecting because I was in Cuernavaca settling my brother's estate. In 1978 I went as a guide for the California Academy of Sciences' tour, but I didn't collect. In 1982 I skipped, but I've been every other year, sometimes several times.

As for funding, Miss Alexander took care of the first two trips; she took care of the trip with Margaret Waters in '49. Then there was an organization, the Associates in Tropical Biogeography, which was the one under whose auspices Dr.

Constance had gone to Baja California in '47. They funded two or three trips.

Holleuffer: Did you have to apply to them? Were you actively going after these grants or--?

Carter: I had to apply for that but I had the support of the faculty.

Then, beginning in 1959, I got to know Mr. [Kenneth] Bechtel through my association with the California Academy of Sciences. He was interested in Baja California. He had set up the Belvedere Scientific Fund for the California Academy of Sciences, and they funded all of my major trips. From then on I funded the minor ones. Miss Kellogg funded the ones between 1948 and 1953. We became very good friends and went together on these trips. So except for small short trips I was pretty well covered, which made it possible. Professor [Ira] Wiggins told me once, "You can get more mileage out of a funding than anybody I know." I really didn't pad my expense accounts a bit.

Miss Alexander died in the fall of 1949. She attended one of the big lectures on campus by a famous paleontologist and that night became ill. She was in a coma for a year; if she hadn't been wealthy I don't think they would have kept her alive but they did. After Miss Alexander died, Miss Kellogg and I took off in the fall of 1950 in the same Power Wagon. I guess we were gone from November 19th to December 28th. We had a trip of more than a month. We only went as far as Loreto, but we had a good trip. We were just joggling along south of Cataviña where the road was not terribly rough but very jiggly, and Señorita Luisa said, "I just don't see how Annie stood this!" [laughs] But she had.

Thoughts on Beauty of Plants and Sites in Baja California

Holleuffer: Around Cataviña there's a first real forest of boojum trees in Baja California. What did you think when you first saw a boojum tree?

Carter: I thought it was like a three-ring circus. The cirios, the boojums, the elephant trees, and then these highly eroded rocks. I was just completely fascinated by them. I wanted to come back and spend a lot of time with the camera. I never have had much chance--I always wanted to camp in them on a night of a full moon and see what they're like. I did accomplish that once. That's my favorite part of the peninsula other than the Sierra Giganta.

Holleuffer: What would you say is the particular interest in Baja? I noticed a lot of endemics there, because it has been almost separated, hasn't it?

Carter: It has been separated, yes, and then not only separated but it has moved northward. According to the plate theory it was maybe some four hundred miles farther south when they were more or less together. That accounts for the fact that in the mountains in the Cape Region there are quite a few things that are more closely related to the mainland flora, mainland of Mexico flora than those in other parts of the peninsula. The Cape Region mountains, during succeeding geological epochs, never were submerged, whereas the mountains to the north, north of the Isthmus of La Paz, went up and down several times and only the peaks remained above water. That's how come in the Sierra Giganta and farther north, the mountains back of Mulegé, you have the same oaks that are in the Cape Region mountains. The same with the Nolina, a tree lily, and some other things. Those are the conspicuous things. Because the higher peaks didn't get submerged these plants apparently survived up there. So they must have been more widespread lower down. So relationships of the flora of Baja California to that of mainland Mexico are most interesting.

I presented a paper at a Mexican botanical congress giving quite a bit of evidence showing that there was a good crossing of plants north of Guaymas before the Gulf [of California] became so deep. When there was a land crossing there, plants that you find in the peninsula at that latitude occur--a few of them--over in the Guaymas area in the Sonora.

Holleuffer: Is that in the thirty degree parallel?

Carter: A little farther south than the thirtieth, the twenty-eighth.

Holleuffer: It's between the twenty-eighth and the thirtieth parallel on the mainland that you also find the boojum tree. There's just that one little strip that's the same flora.

Carter: Yes, and there's one little stand of palo blanco [Lysiloma candida] not far from Guaymas, which is the only one in Sonora.

Holleuffer: Is palo blanco restricted to the peninsula?

Carter: Except for that one little stand, yes. The other species of Lysiloma is very widespread in Sonora and Sinaloa.

Holleuffer: What are some of your favorite plants?

Carter: Well, the palo blanco is my favorite tree. I think it's beautiful. I don't know. I like the burseras, the torotes; they're quite a few of them, they're very picturesque. I like the elephant--what should be called the elephant tree--Pachycormus discolor. There's this confusion of the common name of Bursera and Pachycormus.

There are so many it's hard to say.

Holleuffer: About how many endemics are there?

Carter: I don't know.

Holleuffer: I know that it's a figure that's somewhat subject to change, but--.

Carter: Yes. I don't know, I'd have to look it up. It's become the kind of thing I find easy to look up and don't remember, but quite a few hundred.

It isn't as highly endemic as it was one time thought. Dr. Wiggins has a discussion of that in the flora, but there isn't quite as much endemism as one might have thought because of the isolation. But it's high. With more exploration we've found that things that were thought to be endemic aren't. From the Nelson and Goldman Trip [1906] to the Cape Region, that whole length of distance where they collected oaks in the Cape Region, they described three as new species. One of them has been found to be very common over in the mainland. So that's happened with quite a few things that were first described as new species and then with further exploration it's found out that they aren't all new species.

Holleuffer: This is almost a general theme in botany, though, isn't it? That so little is known, maybe half of the world species are really known, so as we discover things we think at the beginning, "Oh, it's new," and then we find out late that it's really not new.

Carter: Yes, it happens.

New Species Discovered by or Named after Carter

Holleuffer: How many new species have you discovered in Baja? You mentioned these two that you named after Miss Kellogg and Miss Alexander.

Carter: I only named three or four myself, but I've had quite a few things described from material that I collected. I haven't counted them up--maybe six or eight, something like that.

Holleuffer: Are any others named for you other than that?

Carter: Well, Roxie named a sand verbena, Abronia carterae. I think that's been put down to varietal rank. There's a little plant in the sunflower family from the southern Cerro Giganta named Amauria carterae for me. Then the genus named Carterothamnus anomalochaeta, from one of my trips; I think it's a good species but I'm not sure that it's a viable genus. I think the man who named it is too much of a splitter, but it's very beautiful and distinctive hanging rock plant, beautiful thing which I'm fond of.

I found it first in rather miserable dried condition on a trip over towards Los Dolores out of Rancho Agua Escondido east of Ciudad Constitución. It was hanging over a pool, very difficult to get at, and I just got, oh, two or three sheets. It wasn't in good flower; it was very sad, past fruit stage. I sent it to a man at the Smithsonian [Institution] working in that group of plants in the sunflower family. He's a horrible splitter, and this just had a few--I think it just didn't have any good fruits in it, but he was quite sure it was new. He wanted to describe it and I said, "Well, wait until I can get more material if I'm going to have something named after me." He told me what he was going to name it. I said, "I'd at least like it to be fertile." [laughs] He didn't wait, and I did get more material and he still thought it was good.

Holleuffer: Well, we have a few minutes left on the tape. Could you just describe what you mean by a splitter?

Carter: Well, some people take a lot of minor characters and feel that they're worthy of separating one species from another or one genus from another. Instead of finding similarities among the plants they look for all the little differences. If you take the similarities and group them you find that some of the differences fade in importance, so you--.

##

V MORE ADVENTURING AND COLLECTING IN BAJA CALIFORNIA

La Paz and The Working Methods of Joseph Wood Krutch

Holleuffer: I was going to ask you about a trip that you took again under the auspices of the Bechtels with Joseph Wood Krutch.

Carter: I don't remember quite how that came about. Mr. Bechtel, Kenneth Bechtel, was very interested in Baja California. He was a good friend of George Lindsay, director of the academy [California Academy of Sciences]. Somehow or other I was invited to go along on a short trip, flying down in the Bechtel engineering corporation plane--I think there were about eight of us that went--and we flew to La Paz. There Mr. Bechtel arranged for a boat, the Mar Isla of Dick and Mary Lou Adcock, one of the first Gulf "excursion" boats.

We went aboard ship starting in the evening and went as far north as Los Dolores. Joseph Wood Krutch and his wife Marcelle were aboard, and Mr. and Mrs. Wiggins of Stanford, Wally Ernst who was a graduate student at Stanford, and Kenneth Bechtel. We went ashore at several islands. It was interesting to see how Joseph Wood Krutch would work. We'd perhaps been climbing around the islands, and in the evenings would sit down around the campfire. He'd get out a tape recorder and just talk in the tape recorder about his impressions and his thoughts. Or he would just talk to us or he'd recount things that he'd done. I was very, very pleased to be able to go with him because the year I was back at Michigan I introduced myself to his Desert Year and his other desert books. I'd never read them before, and when I was that far away from the desert this was a real solace to be able to read his books. So getting to meet him in person was a real thrill for me.

He liked to talk to the people that we—at Los Dolores I think he spent quite a bit of time talking to the rancher there. But that was the only place that we stopped where there were people. It was only a two-night trip aboard this boat.

Then later, several years later, he'd [Joseph Wood Krutch] never been to San Javier in the Sierra west of Loreto and so, again, Mr. Bechtel flew us down with George Lindsay and Jerry Lindsay. We stayed in Loreto overnight. In fact, we got there and it was the summer and Sportsman Lodge had been closed for the summer, but somehow or other we managed to get it opened for us and a cook came in, and we had the place all to ourselves. I wasn't very fond of Sportsman Lodge, but in this case it worked out.

Then we got a couple of trucks to take us up to San Javier. He was very pleased to have seen that; I wish that he'd seen it before he wrote The Forgotten Peninsula. It really is lacking from that book, but it was a good trip. I think I stayed in Loreto, and they came back on that trip.

Then I visited them once or twice in Tucson, Arizona, when they were still there. His wife, his widow, is now living over in Marin County, I believe. I haven't—I should have looked her up but I haven't. Marcelle Krutch, a very delightful person. But it was interesting to see how he worked, and the kinds of things that he observed and put down on the tape recorder.

Holleuffer: Were they the same things that he wrote about in the book?

Carter: A lot of them. I should reread that; I think there were one or two things that I disagreed with, one or two little minor points I thought were slightly off-beam, but I haven't read it for a long time.

Cooperation with Mexican Botanists

Carter: With the funds from the Belvedere Scientific Fund I was able, two or three times, to bring Mexican botanists over to go with me on field trips which was good international relations.

Holleuffer: Was that your own idea?

Carter: I think in my grant proposal I suggested it because I'd felt and do feel very strongly that we should collaborate with the Mexican botanists instead of just ripping them off of their "gold" which I think a lot of botanists have done. Like the American miners who have gone down and raided the country. I think the botanists have done much the same, just scraped off the cream.

But I was able to bring the director [Ferdinand Medellín Leal] at San Luis Potosí over with me on a good pack trip. And Mario Sousa, who's now director of the National Herbarium [Instituto de Biología] at University of México. He was here on exchange for six months, and a couple of years later I was going to the peninsula and he was able to come over on Bechtel funds, Belvedere Scientific Fund, and go to the Cerro Giganta with me. That was a real good trip. He regaled our guides with tales of the dangers of México City. [laughs] If you let your arm hang out of the car your wrist watch was apt to be torn off and things like that. He had those guides just boggle-eyed one night around the campfire telling of what it was like to live in Mexico City. Of course he had no language difficulty.

Then one year, George Lindsay in the academy truck drove three people who were interested in the cacti as far south as Loreto, he and Jerry Lindsay did. At that point I met them. George and Jerry had to return, and I was able to take them on down to La Paz and around the cape collecting cacti. One of them, Helia Bravo, the woman who's the famous, most famous student of cacti in all of Mexico, I got to know even better than I had previously. She and I were on a Mexican botanical congress field trip in 1960 and we'd been roommates on that trip, so I'd known her ever since then. We're still very good friends.

Field Trips with Roxana Ferris

Holleuffer: Roxana Ferris from the herbarium at Stanford also went on some field trips with you, didn't she?

Carter: Yes,

Holleuffer: She wrote a book on Death Valley wildflowers that I use and—.

Carter: Yes, it's good. She had a real flair for making her descriptions useful and interesting. She did a flora for the Point Reyes peninsula too, which is excellent. She just had a feeling for putting herself into descriptions. I've never used the Death Valley one, but I have the Point Reyes flora. She also did one

for University Press, in the series of natural history books. She had the same position at Stanford Dudley Herbarium that, more or less, I held here.

Holleuffer: That's senior botanist?

Carter: Yes, she was called a curator, but our responsibilities were much the same except that I'm sure she was much more of a botanist than I. She helped Professor [Le Roy] Abrams with the flora of the Pacific Coast. In fact, the fourth volume on the composites after his death she did completely. I don't have it in me what it takes to do a flora.

She had been to Baja California quite a few years earlier with Dr. [Forrest] Shreve and some others. I forget what year it was. She liked it down there and wanted to go again. She and her husband had done some work in Nayarit [1925]; he was an entomology professor at Stanford.

So I had this money available from the Associates in Tropical Biogeography; in 1955 we went to the Cape Region. We packed up into a place from Santiago; they'd never had much contact with foreigners before and these two older women appeared and wanted their services. [laughs] They were a little dubious.

Holleuffer: Well, what age were you then?

Carter: Well, Roxie must have been in her sixties and I was [pauses] maybe I was--in 1955--upper forties, I guess. But they got used to us, and Roxie was real good at making them feel at ease. They were a little dubious, but they were pretty good guides.

They weren't quite used to our food. We had some salami which we had for lunches and local bolillos [buns], and we'd given them salami for lunch the first noon. The next noon they said, "No somos acostumbrados" [We are not accustomed], which is the polite way of saying you don't like something or are afraid to eat it. So they pulled their dates and things out.

Holleuffer: I bet you ate a lot of goat cheese.

Carter: Quite a lot, yes. Sometimes when I was outfitting for a trip, at a ranch I would get fresh goat meat and we'd hang it up and let it dry some, put salt on it. Sometimes we'd have to toast the ants off from it the next day, [laughs] but it was good. On the first trip, the deer we had, Senorita Luisa broke a front tooth on that which made her rather unhappy but it was good venison, venado [deer].

Holleuffer: Did you ever have a hard time with adjusting when you came back? It seems like such a different life down there, and the way that you had to live and the things you had to do were so different from what--?

Carter: It would take me, when I'd go down to Loreto, to prepare for a field trip, about two or three days to get in the swing of life there. When I came home it would take about a week to get adjusted.

I didn't finish with Roxie. After that Cape Region trip we returned to Loreto. There, Howard Gulick, co-author of the very good Baja California, Lower California Guidebook, joined us. We got animals and went from Rancho Viejo, which is near San Javier, along the old Mission trail from Javier to Comondú and then made a circle around the north side of the Cerro Giganta and back to Loreto. I think it was a trip of about a week and it was really interesting.

Across the mesa north of San Javier, it's a volcanic mesa just completely covered with basalt, rather medium-sized rocks. But Mission trails were so heavily trafficked that the basalt would get pushed aside and so there would be these deep furrows in this volcanic mesa. You'd see a succession alongside each other of trails that had gotten too washed out to use.

Holleuffer: But dating back to the eighteen hundreds.

Carter: Yes, it was Junipero Serra's route between San Javier and Comondú and probably the route he followed heading north.

Don Felipe was such a gentleman. He was on that trip. There were no bushes to hide behind if you were looking for baños [bathrooms], so I went off looking for a rock big enough to serve [laughs] and when I got back Felipe said, of course in Spanish, he said, "We thought you were looking for flowers. Why didn't you tell us? We would have just turned our backs," which I thought was wonderful.

Don Felipe believed in education and he would try and get the ranchers to bring their children into school, to go to school and also to have no more children than they could educate. He only had two and the son went on to the university in Mexico and is a Pemex engineer now.

Physical Injuries Sustained in Field

Carter: I've been very lucky; I've had very few accidents to myself in all the rough things I've done. I really lucked out on that. But, on the trip when the botanist from San Luis Potosí was with me, we were up above the sheep hunting country that Steinbeck wrote about. It was rugged and we'd climbed down a cliff. Franco Murillo was climbing up again he dislodged a rock. I was just on a tiny ledge against the wall, and this darn rock came bouncing down and I couldn't escape it. It hit me right here [points out] in the ribs and knocked the wind clear out of me. Just really deflated me.

So Franco said, "Did it hit you hard [Te golpeo]?" And I said, "Si, bastante fuerte [Yes, quite strong]." [laughs] It took a little while for the wind to go back in, but I got back to camp all right. That night I was miserable and the next day I was worse, but we climbed the highest peak in the area. [laughs] I was really exhausted when I got back. It was two or three days before we got to Loreto, and I didn't tell anybody that I hurt, but I did hurt. When I got back here I had an x-ray and I had three cracked ribs.

Holleuffer: Oh goodness!

Carter: So that was the first accident I had. The next one was when I was trying for the third time to get to Cerro Mechudo which is the highest peak at the south end of the Sierra Giganta--it's about fifty miles north of La Paz--and I'd seen it from boats. Here was this big peak standing up that looked sort of bald on top, a real interesting looking mountain. I'd already tried to get there with a friend, Enid Larson, a retired teacher who lives now at Big Pine.

Enid and I had the academy truck and got animals, and I thought I'd arranged to get there. It was a long trip up arroyos and across mesas. On the second day we reached a crest overlooking the gulf and at the north side of the Cerro Mechudo. We thought we were going to make it and our guide said, "But we can't get to the peak from here. We should have taken a side trail farther down." I thought afterwards that he was afraid to take us on that route, but we had good collecting and that's where I re-collected this new genus named for me. Found it in a beautiful condition, just clumps hanging on these cliffs. And on these cliffs I collected another member of the composite family that was named for me, Amauria carterae.

Holleuffer: Maybe you were meant not to get to the top of the mountain.

Carter: The next year, Reid Moran came down and we tried again. We had an academy truck. There'd been heavy storms and we couldn't even get to La Soledad, which is the ranch where we would have had to get animals. We couldn't--it was just impossible. The arroyos were all flooded, so we went up toward Loreto and took a pack trip back of Puerto Escondido into the high mountains there. That's the first time I ever saw mountain sheep.

Early one morning I heard a little crackle and I looked up and no farther from me than the end of this library was a beautiful horned mountain sheep going through camp.

Holleuffer: Oh, about six or seven feet away?

Carter: It seemed that close. There he was, walking through our camp. I wakened Reid--I guess the fellows, the two guides couldn't hear--but Reid saw it too.

So the third time--the next year--tried again for Cerro Mechudo and we got the same guide [Juan Cruz] that I'd had with Enid Larson two years before. At that time he'd moved his whole family into La Paz. We took him out of La Paz and arranged for animals at ranches on our way to La Soledad. We had to wait half a day for him to get there with the animals, and we started. Crossed the first ridge to the El Coyote drainage, which would lead up Mechudo. Had a good lunch and then were going along. I was riding a horse--before that Reid was on a mule, he was ahead of me, and I said to him, "Look out, your mule is going to lie down." Reid is a big, tall fellow so he just put his feet on the ground and let the mule lie down. [laughs] But I had a horse. So we went on.

We came down a real steep, rocky place with a rough trail and the horse stumbled and then, to gain its equilibrium, it ran. Then it fell, and I catapulted off. I landed sitting with this arm in front and my knapsack which had been on the right-hand side of the pommel was about ten feet in front of me, which shows the force that the darn horse fell with. But, it got up and stood there with its head down just looking perfectly innocent. I sat with this arm in front busted here. So that was the third time I didn't get to Mechudo. [laughs]

Holleuffer: Did they take you back to Loreto?

Carter: No, La Paz.

We'd left the truck at La Soledad, but two years before I'd driven the truck from La Soledad into this arroyo where Juan Cruz had his ranch. At that time it was a fairly passable road. We

got there, but in the interim there'd been storms. So Reid and Juan made it back to La Soledad in much shorter time than we'd come with animals. They really hoofed it back and got to the truck to come and get me. It took them hours and hours; they had to practically build the road. Juan would go ahead and say, "Okay, come this way." Reid just didn't see how they ever got there because it was dark by then. We got to La Paz, I guess, three a.m. the next morning and checked in at the Hotel Perla. We'd made a splint for me out of cardon ribs. We had to stop once because the gas tank got empty, and it was so cold we could hardly untie the other jeep can to fill the tank. So we finally got to La Paz.

I had a friend, an American friend, in La Paz. Next morning she looked up a doctor for me. So about twenty-four hours later I got to a doctor. Unfortunately he didn't do too good a job of putting me together but it works. It was funny because I was scheduled to lead the first of the academy trips down to Baja California, the one that just flew to La Paz and went around the cape. So I led it with my arm in a cast, which was fun. [laughs] That was a good academy trip, anyway.

Holleuffer: Was that a group of maybe twenty or thirty people who were basically tourists?

Carter: Well, they were academy members all interested in natural history. As all of the academy trips are. It's a wonderful group of people because they're really interested in the outdoors; it's not just an ordinary tourist group. They like to know what's around and all about it, as much as you can tell them. And they're mostly good sports. Once in a while you get a headache, but—. As I say, I've had very good luck, considering.

Once in the Cape Region I had a mule do a backflip with me, but I was lucky to throw myself clear. But the guide who encouraged the mule to get up, because it just lay there, got thrown against a rock and he got some cracked ribs. So he was really interested in the tequila for the rest of that trip. [laughs] Later I could sympathize with him; at that time I didn't know how much he might be hurting.

Interest in Editing and Letterpress Printing

Holleuffer: While you were taking these trips to Baja California, what were your responsibilities back here at the herbarium? What was your position and what did you do?

Carter: Well, I was in charge of training and work schedules for the graduate students [and] the filing and the whole business of keeping the herbarium going. I was in charge of loans and exchange--Helen Sharsmith was really in charge of exchange, but I collaborated on that. It was just the general administration of the herbarium, working on budgets and annual reports and things like that. At that time, for several of those years, Dr. Mason was editor of Madroño, and I was secretary of the editorial board [1943-63] and that took quite a lot of time because I was the one who saw the quarterly issues of Madroño through the press. I was sort of pleased when one was dedicated to me in 1966 [Volume 18]* after I'd resigned from that position, or after somebody else was editor than Dr. Mason.

Holleuffer: Did you do the actual editing and then oversee the actual printing process?

Carter: Yes. I did editing, proofing, dummy, preparing an issue for a commercial press.

Holleuffer: Did you learn that step by step?

Carter: Yes. I was sort of interested in printing anyway and my housemate and I--she was in library school. We had here at the herbarium a little printing press for doing our labels so I became interested in actual typesetting. We have a printing press in our basement now, called the Runcible Cat Press which we do printing on.

Holleuffer: What do you print?

Carter: Oh, we print our Christmas greetings, usually a little, very brief annual report just on the largest-sized postcard you can mail. We believe in brief ones, getting them brief and we hope, entertaining. I did all my labels for my Baja California collection. This kept me quite busy when I was more actively collecting. We do birth announcements for friends and change of address. Never anything for money, we just play with it. It's time-consuming but sort of fun, and definitely outmoded now with all the xerox machines and things like that. But it's fun to be able to set type.

Holleuffer: Does it look something like an old Gutenberg press? Put a sheet of paper in and crank it down?

---

* See Appendix A.

Carter: No, ours is more modern than that, but it has a flywheel and foot power. The rollers run over the ink plate, then the platen bearing the paper comes in against the type. So it's a stage after Gutenberg. But the one we have is old-fashioned and I saw one like it at the [Henry] Ford Museum and Greenfield Village in Detroit. It doesn't have what they call a throw-off lever. The throw-off lever will let the flywheel keep spinning and you don't get a printed impression if you put your paper in wrong. With ours you have to stop the wheel to keep from printing.

Holleuffer: So yours could go into a museum.

Carter: It could, yes. Maybe it'll have to someday.

I went down to Berkeley High [School] and took a course in printing to help learn about it. That was fun. My grandfather had been interested in printing and in southern California he started a magazine in the 1880s called SemiTropic California. For my father and my aunt he purchased a little printing press, which it turned out was the same kind we had here in the herbarium for printing labels. For a year, those youngsters who were just entering the teen age had a little amateur paper which was very much in vogue at the time. The paper was called the "Willowdale Press." When my father saw our press at the herbarium, he said, "That's just the same as we had as youngsters." Carey Bliss at Huntington Library was interested in these amateur presses, and he wrote a little book called The Willowdale Press which told all about ours plus other amateur presses at that time. So I guess I did sort of inherit this interest in printing. I'm sure my grandfather must have done a lot of typesetting because it was six point type, and that's horrible, just tiny little stuff, very small. I don't see how the kids did it. After a year they gave up.

I have a complete set of the little Willowdale press paper as well as the book about them.

International Botanical Congresses

Holleuffer: You had mentioned that you had been to some botanical meetings. I remember you said something about Leningrad.

Carter: Yes. Every six years, I think it is, an International Botanical Congress is held in various parts of the world. In 1975 it was held in Leningrad; in 1969 it was held in Seattle, and then other places, Edinburgh, Montreal. The only ones I attended were the

one in Seattle and the one in Leningrad. Then, in '81, in Sydney, Australia--a good excuse to go back to Sydney, or back to Australia, which I think is a great place, especially the outback. It's sort of more like Baja California.

I didn't give any papers at these, but I did attend. The only congresses that I've given papers at are the Mexican botanical congress [Congreso de Sociedad Botánica de México]. Those are held every three years. I've given papers at several of those.

Holleuffer: So you've given them in Spanish?

Carter: Yes. Once I gave a paper at a local meeting that was held at Tempe in Arizona. I did attend that. That's about the only American botanical or scientific society series that I've ever attended. I concentrate on the Mexican ones. They always have wonderful field trips after them which are fun to go on with usually an international group, more Mexicans than others, but it's really great.

This past year, in conjunction with the Mexican Botanical Society there was an international group of people interested in the legumes that are in the Acacia group. So that was really international, from Australia, France, Sweden, Germany. We had a field trip of fourteen people afterwards, seven Mexicans and seven extranjeros [foreigners]. It would have been a fine field trip but there was a hurricane that interrupted it, or two hurricanes, right in the middle, and we had to quit because the roads were all washed out where we were going to go. We were going to go up the north coast, the west coast, north of Acapulco to visit some off-the-beat places there, in addition to stopping at one of the tourist places. But we couldn't get there. We got about seventy kilometers out of Acapulco--where I'd never been before [laughs] and never have had any desire to go but it was on the route--and the bridge was out. There was no way. Then another hurricane came and things got worse. The papaya orchards were flooded and cornfields were ruined; it was a mess. So we went back to México City and visited the Botanic Garden. [laughs]

##

Thoughts on Collecting as a Lifework and the Value of Herbariums

Holleuffer: I wanted to ask you before we stop just a general sort of question. It seems to me that from what I know about botany that it's a science that's mostly interested in knowledge for the sake of knowledge. There doesn't seem to be many ulterior motives [laughs] of the botanist. They seem to just like to go out and collect plants and add to the knowledge of plants in the world. I know some botanists do discover plants that have agricultural or medicinal uses or some practical use, but this doesn't seem to be the main objective. What is it that has interested you in botany, and what's made you devote your life to this field?

Carter: Well, partly, it was a livelihood but, for me, I really am more interested in the things like ethnobotany, the uses of plants. One time I thought that maybe I should have gone to UC [University of California] Davis instead of UC Berkeley to get more involved in the economic aspects of botany rather than the purely investigative, but it didn't turn out that way.

A collection of plants like those in the herbarium serves man as a source of information for people going out to perhaps look for medicinal plants. During the war, World War II, they needed to know where in South America they could find plants that might be a source of quinine. So people who were going to go out and search for plants that were a source of quinine would come first to the herbarium as the initial stage of their fieldwork to find out where those plants might be located.

The same is true for the work on jojoba. They are trying to build up good collections of jojoba, Simmondsia chinensis, it's called now, which is an important source of oil. They go to an herbarium first to find out the best places where they may find stands of jojoba, ones with big fruits and things like that. It's an initial stage of research.

You go to the herbarium to find out information about plant distribution, where plants, related plants, may be found. Then the whole business of knowledge of history of plants, plant migration, all those things depend on herbarium collections. You don't necessarily think that you're going to do that, but your collections result in that mass of information being available for future study. I don't know if that answers your question but--.

The herbarium does sound like a pretty, well, useless place but it really has a tremendous amount of value for reference work. There was--what was the study? They were trying to date

some pollution, a type of pollution, and they could test for that pollution in the plant material. So they'd go to the herbarium and test leaves of plants that were collected before a certain date and after that date, and then try and derive from that some relationship to what pollution had done. There are just innumerable things that keep coming up that the herbarium is useful for, instead of it's being just a stack of dried hay.

Holleuffer: I think that sounds like a good place to stop.

Carter: There's one thing that I did want to say about my relationships with the California Academy of Sciences after I began going to Baja California. The director, George Lindsay and his wonderful wife, Jerry Lindsay--especially, I think, after they were married--Jerry got the idea of having field trips or natural history trips under the auspices of the academy. It hadn't really been a going thing until she got it started. So, in 1978 they had their first one to Baja California, and I had the good fortune to be on it. That was just around the cape and since I'd been working there, why George and Jerry had me go along. So for four or five years after that I led trips the length of the peninsula, bus trips down one way (return by air), and I was the botanist on the trips. It was really a wonderful group of people to go on a field trip with, to lead on a field trip. That was one of the highlights of my years after retirement, one of the things that I did.

I've discouraged these trips now because Baja California is so changed now. The accommodations that the travel bureaus tie you in with just don't fit in well with natural history, so I've discouraged their having any more of those trips. Now they have the trips by boat around the gulf and out in the Pacific. You get ashore on those, but it isn't quite as much fun as being on land all the time.

Holleuffer: You haven't led any of those circumnavigationals?

Carter: On one, yes. Then I was a semi-leader on one of the whale watching trips on the Qualifier 105, but I did go on one of the circumnavigated ones.

Holleuffer: Well, that was the end of your Baja piece.

Carter: Fine.

Transcriber: Anne Schofield
Final Typist: Marjorie Larney

TAPE GUIDE -- Annetta Carter

To you, ANNETTA MARY CARTER—"Señorita Anita" south of the Border—recent President of the California Botanical Society, long-time Secretary of the Editorial Board of Madroño, and during three administrations the leavening spirit of the University of California Herbarium, we affectionately dedicate this volume.

During your long association with the University Herbarium, from student assistant to Principal Museum Scientist, you have been the trusted advisor of faculty and administrative officers, a generous counselor and confidante of successive generations of grateful students, and an esteemed friend to your associates and herbarium visitors.

Champion of human rights and friend of the friendless; interpid field botanist and indefatigible collector and interpreter of the plants of the remote ranges of Baja California, especially of the Sierra de la Giganta; gracious ambassadress to our Mexican botanical friends—you have shown in all your broad and varied responsibilities over the years an unfailing skill and competence which is overshadowed only by your personal warmth and outstanding human spirit.

Madroño dedication, Vol. 18, 1966

"C. V." for Annetta Mary Carter

Born: June 28, 1907. Sierra Madre, California (Los Angeles County).

Schooling: Sierra Madre Elementary School (Class of 1922).
Pasadena High School (Class of 1926).
Pasadena Junior College (Class of 1928).
University of California, Los Angeles, Summer Sessions, 1927, 1928.
University of California, Berkeley (A.B., 1930; M.A. 1932).
[Teaching assistanships, 1930-1932].

Employment: University of California Herbarium, Berkeley (at first part time in the early 1930's and then worked up thru the "ranks" until retirement in December 1968---with the title of Principal Herbarium Botanist (but by then it was mostly administrative).

Other data: Served as Secretary to the Editorial Board of Madroño, California Botanical Society, 1943-1963 [had much of the responsibility of seeing the quarterly journal Madroño thru the press].

President, California Botanical Society, 1965.

Elected a Fellow of the California Academy of Sciences, 1957 or '58 (?).

"On loan" for two six months periods to the University of Michigan, Ann Arbor, to curate the herbarium material amassed by Professor Harley Bartlett, 1957, 1958.

Research Associate, Herbarium, Dept. of Botany, University of California, Berkeley (a non-salaried title), 1969 to present.

Sociedad Botánica de México. In 1975, at the Sexto Congreso of the Sociedad in Xalapa, I was presented with a certificate of Honorary Membership.

Major research interest: flora of southern Baja California, México---especially of the Sierra de la Giganta [ca. Lat. 24°30'--- 26°20' N.]. The first Baja California field trip was in 1947-48 when I accompanied Annie M. Alexander and Louise Kellogg. This three months expedition changed the course of my life (cf. popular accont in California Monthly, June 1949). [For reports on many later field trips see: the logs for field work in the Sierra de la Giganta of Baja California Sur, Mexico, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1970. Belvedere Scientific Fund, California Academy of Sciences, San Francisco. Copies are also in the Herbarium Library, UCB.]

January 1987

TRABAJOS SOBRE BAJA CALIFORNIA, por ANNETTA CARTER

Observaciones sobre los encinos de Baja California [Sur]. Bol. Soc. Botánica de México, No. 18, 39-42. 1955.

A new species of Bouvardia (Rubiaceae) from Baja California, México. Madroño 13:140-144. 1955.

Afinidades florísticas de la Sierra Giganta, Baja California. Primer Congreso Mexicano de Botánica. 24-26 Octubre 1960. México, D. F.

Correlación entre la distribución de algunas plantas y la historia geológica de Baja California, México. Segundo Congreso Mexicano de Botánica. 17-21 Septiembre 1963. San Luis Potosí, S. L. P.

The genus Alvordia (Compositae) of Baja California, México. Proc. Califor Acad. Sci. 30: 157-174. 1964.

Una forma nueva de Lophocereus [Cactaceas] en Baja California, México. Cactaceas y Suculentas Mexicanus 11 (1):13-17. 1966.

Some historical and distributional aspects of the flora of the Sierra de la Giganta, Baja California Sur, México. Asociación Cultural de las Californias, VII Symposium, April, 1969. Tecate, Baja California.

Some ethnobotanical notes on the plants of the Sierra de la Giganta, Baja California Sur. Pacific Coast Archeological Survey Quarterly 6 (1): 29-33. 1970.

Evidence for the hybrid origin of Cercidium sonorae [palo brea] (Leguminosa Caesalpinioideae) of Northwestern Mexico. Madroño 22:266-272. 1974.

The genus Cercidium (Leguminosae: Caesalpinioideae) in the Sonoran Desert o Mexico and the United States. Proc. California Academy of Sciences 40:17-57. 1974

Pollen studies in relation to hybridization in Cercidium and Parkinsonia (Leguminosae: Caesalpinioideae). Madroño 22:303-311. 1974. [with Nel Rem].

Las relaciones taxonómicas entre los géneros Caesalpinoideos Cercidium y Parkinsonia. Sexto Congreso Mexicano de Botánica. 24-26 Septiembre, 1975. Xalapa, Ver.

I. G. Voznesenskii, early naturalist in Baja California, Mexico. Taxon 28: (1, 2/3): 27-33. 1979. Presented at 7th Congreso, 15-21 Oct. 1978 in Mexico City.

La vegetación de la Sierra de la Giganta, su importancia como potencial científico y económico. Asociación Cultural de las Californias, XVIII Symposium, Loreto, Baja California Sur, Mayo, 1980.

A new species of Acacia (Leguminosae: Mimosoideae) from Baja California Sur, Mexico. Madroño 28:220-225. 1981. [with Velva Rudd].

Lectotypification of Cercidium floridum (Leguminosae: Caesalpinioideae). Taxon 31 (2): 333-335. 1982.

June, 1982

Annetta Carter

67

Acacia pacensis (Leguminosae: Mimosoideae), a new species from Baja California Sur, México. Madroño 30, 176-180. 1983. [with Velva Rudd].

Aspectos generales de la flora de Baja California. Cactaceas y Suculentas Mexicanus 31: 79-96. 1986 (Oct.-Dec.).

Annetta Carter
January, 1987

Note. Papers presented at the Mexican Congresos were not published, except for that at the 1978 Congreso.

Plants and Man in the Sierra de la Giganta of Baja California Sur, Mexico. Symposium paper presented at the Society of Woman Geographers' Triennial meeting, Washington, D. C., April 28, 1984.

New genera based on material collected by Carter in Baja California.

Carterothamnus King, Rhodora 69:45. 1967. (Compositae). C. anomalochaeta King

Carterella Terrell, accepted by Brittonia for publication, Jan., 1987, (Rubiaceae)

Based on Baja California material collected by Carter a number of new species have been described. Some of them bear the specific epithet carterae.

INDEX -- Annetta Carter

Regional Oral History Office
The Bancroft Library

University of California
Berkeley, California

Women in Botany Project

Mary DeDecker

BOTANIST AND CONSERVATIONIST OF THE INYO REGION

With Introductions by
Betty Gilchrist and Peter Rowlands

An Interview Conducted by
Carol Holleuffer
in 1985

MARY DeDECKER
September 1985

TABLE OF CONTENTS -- Mary DeDecker

INTRODUCTION -- Betty Gilchrist

The beauty of the awesome, towering eastern High Sierras forms a backdrop for the warm, welcoming home of Mary and Paul DeDecker. Each time I cross the manicured green lawn, observe lovely shrubs and flower-beds nurtured and tended by Paul, and see Mary at the door to welcome me, I realize that this setting in the little desert town of Independence is truly appropriate as home base for this world-traveled couple. For fifty years Mary and Paul climbed, backpacked, and camped with their growing family over most of these mountains and the deserts of Inyo County.

I first met Mary DeDecker in the late 1970s in the Alabama Hills. I had joined a wildflower identification field trip for the Eastern California Museum. After 1967 when my husband and I became weekend residents of the Owens Valley, I had become a distant admirer of Mary's precise written and verbal statements on the effects on valley plant life of underground water pumping. Reading of her presentations at public hearings for City of Los Angeles and for Inyo County officials did not prepare me for the actual lady and her simple, charming manner with which she drew me into a consuming interest in botany "just for the joy of it." Following her eager footsteps up the side of a mountain to seek out some elusive rare and endangered species became a favorite pastime for me, along with many others.

One of Mary's natural talents and great interests is sharing her specialized knowledge with all manner of people, from well-known professionals to the youngest students in elementary schools. From the lecture platform of the structured classroom setting of UC Extension to the informal lunch break in the Last Chance Mountains, the fortunate student is constantly learning and enjoying it. The effect of this manner of teaching is evident in the DeDecker extended family. Their two daughters and their grandchildren have been subtly influenced in their choice of partners and professions in the various fields of natural science.

In any year, dozens of questing students with an unknown plant or flower, or a question on local history, are welcomed at the DeDecker front door. Mary may consult her extensive library or her own herbarium which shares an outlying building with Paul's workshop. More often with one bright-eyed look that lovely smile of recognition lights Mary's face and the common name, scientific name, genus species, habitat, soil and moisture conditions and other appropriate information is forthcoming.

In my experience, Mary is constantly writing at her desk in the window that looks across the desert toward towering Mt. Williamson. Author or co-author of books, monographs, newsletters, and magazine articles, she explores botanical subjects, conservation issues, and local history and mining. Over decades, she has devoted much time, energy, and thought to the development of the Eastern California Museum in Independence. She has been instrumental in the museum's becoming an educational, cultural, and research center.

Concerned over water management issues in the Owens Valley, this fiery little lady with the soft firm voice has been able to stand up to all manner of bureaucrats and politicians, using her knowledge and experience. She has been instrumental in organizing the Owens Valley Committee, a non-profit organization. I was swept into this group of citizens whose goal was to focus public attention on public actions affecting present and future welfare of the environment of the Owens Valley.

After participation in the early stages of the California Native Plant Society, Mary helped organize the Eastern Sierra Chapter, appropriately named Bristlecone. This, again, gives the opportunity for more people to be aware of and participate in learning the unique botanical aspects of this area. Field trips, an important activity of this organization, have often been overnight camp-outs. The storytelling ability of Mary and Paul at the evening campfire establishes an easy camaraderie and the start of long-lasting friendships along with a continuing interest in botany.

No activity of Mary's will ever surprise me. Flying in to Tin Mountain by helicopter with a fellow botanist; spending a chilly night on Cerro Gordo after mechanical difficulty with the jeep; chasing madly across Saline Valley in pursuit of an elusive plant; roasting marshmallows on an open fire with family and friends; this to me is the delightful world of Mary DeDecker.

Betty Gilchrist

December 1985
Lone Pine, California

INTRODUCTION -- Peter G. Rowlands

When I arrived in Death Valley to take a job with the National Park Service, one of my first tasks was to go through the files of my predecessor, Mr. Pete Sanchez, a resources management specialist who had been a fixture here for about seventeen years. As I perused voluminous, dusty files crammed with information on desert pupfish, burros, springs, geology and other accumulations of letters, pamphlets and assorted bits of knowledge both trivial and profound, I came across a file labeled "rare plant species." Among its contents were a number of letters to Pete from Mary DeDecker, some of which dated from the early 1970s. I should not have been surprised as I have a similar collection which I gathèred over the seven years I labored as a botanist for the BLM [Bureau of Land Management] (a sometimes thankless job, were it not for people like Mary). I dare say that Pete Sanchez and I are not unique in this regard; I'll wager that more than a few California desert botanists and ecologists have been the recipients of Mary's advice, counsel, and knowledge.

You see, Mary DeDecker is one of those rare people who make a difference. I doubt that there's a public agency in California east of the Sierra that has not benefited in some way or another by her knowledge and expertise. As a result, Mary has had an immeasurable influence on land-use management to the betterment of all the people of California, and in particular the citizens of the Owens Valley and northern Mojave Desert. Her constant vigilance over our natural resources has affected us all, both indirectly and directly. I needn't dwell on Mary's many professional accomplishments; these are legion. What is worth noting is that in my longer conversations with her the subject usually turns to her family: her husband, Paul, her daughters, their families, and especially her grandchildren. There is no doubt about the depth of her love and the pride she feels for those close to her. Mary loves the land and its resources, but she also loves people. There is no hint of nihilistic misanthropy which sometimes tarnishes the shining armour of many involved with environmental conservation.

I distinctly remember one conversation with Mary concerning Dedeckera, a brand-new California plant genus, overlooked until Mary discovered it in the Eureka Valley area in 1976. Mary explained to me she was so happy to have a genus named, not for herself, but for her family. She has two daughters and this would assure the continuance of Paul DeDecker's name in the absence of sons to carry it on. What an incredible gift and sentiment!

Peter G. Rowlands
Resources Management Specialist

October 1985
Death Valley National Monument
California

INTERVIEW HISTORY

Mary DeDecker is a self-educated botanist. From her home base in Independence, a small town in California's Owens Valley on the eastern side of the Sierra Nevada, she has become the acknowledged expert on the plants of Owens Valley and the Northern Mojave Desert. Not content just to identify and collect plants, she is a forceful activist for preservation of the environment that supports the desert flora--most prominently in the battles to protect the Eureka Dunes and to limit the damage inflicted on the Owens Valley by the Los Angeles Department of Water and Power.

Mrs. DeDecker was interviewed for the California Women in Botany Project on January 16 and January 17, 1985, in her Independence home. Carol Holleuffer shared Mary DeDecker's feeling for the desert and desert plants and her concern for conservation of these fragile resources. Their mutual interests helped create a lively dialogue, and the interview transcript reflects a warm and spontaneous conversation between the two women. Letters in the project files show that Carol had intended to record one more session with Mary DeDecker and hoped to accompany her on upcoming Mojave Desert field trips.

The interview was edited by Annetta Carter, whose familiarity with the botanical nomenclature and experienced editor's eye made the task of this office much easier. Mrs. DeDecker also reviewed the transcript, answering a few additional questions, clarifying information where necessary and providing supplementary material for the appendices.

Ann Lage
Interviewer/Editor

January 5, 1987
Regional Oral History Office
486 The Bancroft Library
University of California, Berkeley

Regional Oral History Office
Room 486 The Bancroft Library

University of California
Berkeley, California 94720

BIOGRAPHICAL INFORMATION

(Please print or write clearly)

Your full name Mary Caroline Foster DeDecker

Date of birth Oct. 3, 1909 Place of birth Barden P.O., later RFD Texas County, Oklahoma Guymon

Father's full name Charles Morrison Foster

Birthplace Monticello, Illinois

Occupation Farmer, Office Manager for Los Angeles DWP

Mother's full name Phoebe Arabella Thompson

Birthplace Independence Township, Osborne County, Kansas

Occupation Housewife

Where did you grow up ? Northridge (formerly Zelzah) San Fernando Valley Los Angeles County, California

Present community Independence, Inyo County, California

Education Van Nuys High School; 1 year at UCLA

Occupation(s) Secretary to Supt. in Owens Valley Unified School; Title Officer, Title Insurance and Trust Company.

Special interests or activities Family, native plants, local history.

I BEFORE OWENS VALLEY

[Interview 1: January 16, 1985]##

Childhood Interests in Plants and Science

Holleuffer: I'm here in the Owens Valley to talk with Mary about her life as a botanist and a local historian. She and her husband Paul have lived in Independence since 1935.

When you first came to Independence, Mary, you had two small children and had studied some art at UCLA. But you didn't have a background in botany?

DeDecker: No, my only background was just an interest in plants.

Holleuffer: Had your family sparked that interest at all?

DeDecker: Well, I think my father [Charles Morrison Foster] did. When I was a small child--he was a farmer at that time--he encouraged me to always have a little plot to grow something.

I'll never forget a very tragic, to me, experience when he gave me seeds for nasturtiums and petunias and verbenas because he knew those were my favorite flowers in the garden. Almost every hour, I watched for those things to come up. And finally, I saw some little green things coming up, but they didn't have the leaves like the flowers I was expecting. So I started pulling them out. I thought they were weeds.

##This symbol indicates that a tape or a segment of a tape has begun or ended. For a guide to the tapes see page 59.

DeDecker: And then my father explained to me that those were the baby leaves for those plants and that they would change as the plants grew and be the ones that I was expecting. So I was completely crushed to think I'd been pulling up my flowers!

But anyhow, he taught me a lot about observing plants. He seemed to have a feeling for them. Of course I didn't realize all that then. All the years that I was growing up, I always had a little garden of some kind. Maybe it was just a little flower garden or a bed of strawberries, or something. None of my brothers or sisters ever had this, so it must have been a special interest I had that my father realized.

Holleuffer: You were what age when you started growing these plants? Four or five?

DeDecker: Oh, probably. I was just a little tot. I don't know what age I was, but I was very young. I probably wasn't more than four.

I think, too, that while I never knew my maternal grandmother [Arabelia Cowell Thompson] as I grew up--she died when I was maybe six years old and she lived in Ontario, California, after retirement, while I lived in the Panhandle of Oklahoma at that time. I knew her, but I didn't see much of her--she was a woman doctor [practiced in Osborne, Kansas] when women didn't do such things. And knowing what it took to be a woman doctor, to be able to be accepted in med school, and to put up with all that she must have had to put up with from the men students--in other words, I think I inherited her perseverance and probably her scientific trend. So I feel that my father and grandmother were probably behind my deep interest in botanical things.

Education and Marriage

DeDecker: Then when I was in high school [Van Nuys High School in the San Fernando Valley], I took biology, which was my first science course. And I loved it. We were told to develop a project on plants or some form of animal life. Most of the students chose plants, probably because they were easier to find. At the end of the term when they were checking in their projects, the teacher put me in charge of checking them over and making the basic comments on them to be sure that they were being turned in as they were supposed to be. I didn't think of it at the time, but looking back I must have showed some kind of a special interest or ability in plants for her to turn all that over to me.

DeDecker: I didn't take any more biology in school. I belonged to the school Science Club, which in those days was kind of an exclusive club limited to, I don't remember how many kids. But it was limited, which they wouldn't get away with now. It was composed of students especially interested, or gifted in, the science classes.

So then I went to UCLA, and I was interested in crafts. At that time, I thought I would like to teach something in the craft line, so I majored in art. I did do well in the crafts part; I was no good at all in painting or that sort of thing. But I took a course in geography that I loved. And I soon realized that I should be in a science major. Then that summer I worked to earn money to go back to school.

Holleuffer: Was this about the beginning of the Depression?

DeDecker: Just before the Depression. Things were slowing down, and my father, at that time, worked in a commercial office for the Department of Water and Power [Los Angeles DWP]. He was head of the North Hollywood office when he retired. But the family was really having financial problems at the time and couldn't afford even to send me to UCLA. When I'd earned money to go back, they needed it for taxes.

Holleuffer: Can you recall how much it was to go to UCLA at that time?

DeDecker: It wasn't very much. It was tuition and, of course, expenses of buying books and supplies. Even though it wasn't a lot, it was just more than I had. I did work for my room and board. I worked for a family as a sort of mother's helper, they called it, which helped a lot.

In the meantime, Paul [DeDecker] was urging me to forget it and get married. I saw that going back to school then was hopeless, so I did get married. We were married in 1929. Then a year or so later I was planning to go to UCLA again. By that time it had moved over to Westwood, just over the hill from where we lived on Ventura Boulevard out from North Hollywood. I was all ready to go back to school, and I was very excited about it. But we were into the Depression by that time, and Paul had managed to get the job with the Department of Water and Power in Los Angeles. They put him on the split shift. Well, jobs were so scarce you didn't question anything if you had a job, but that was the end of my hopes of going to school. I would have had to have the car to go back and forth. There was no public transportation between the two points. So, I wasn't able to use the car because he needed it during the day, when I would have had to come and go.

DeDecker: Then we had our first daughter in 1932, and a second one in 1933. In the meantime, DWP started the Mono Basin Project up here, and my husband had been coming and going. He was in the transportation section and drove trucks and heavy equipment. Also, part of the time he ran a bus back and forth hauling workers because they were hiring lots of workers to work on the Mono Basin Project near Lee Vining. The headquarters were in Independence.

Decision to Move to Independence

DeDecker: So he finally had the idea that he would like to move up here. And I think, probably, they encouraged him to do it so he would be up in this area. At that time we had the only two grandchildren, and we had a lot of family around that was sort of getting in the way of raising our children. So we thought it would be kind of nice to go.

Holleuffer: Get away from the family?

DeDecker: Yes, to go up and just be on our own. Paul had told me how beautiful it was up here. And I had never been here. He brought me two bouquets of flowers. One was the Kennedy mariposa [Calochortus kennedyi], the flame-colored mariposa, and the other was apricot mallow [Sphaeralcea ambigua]. They were both new to me. And they were just beautiful! I was just overwhelmed, so I thought any place that grew such flowers as that would be a nice place to live. So we moved up in November 1935. It was very cold.

Holleuffer: How many people were in Independence at that time? What was the population?

DeDecker: It was close to a thousand. In fact, it's smaller now than it was at that time. The next morning after we had moved up--we got up here in late afternoon--I looked out the window and saw the mountains were all snowy and were pink from the sunrise. And I was so thrilled! I really fell in love with the place.

Of course, we were very busy and tied down. Paul worked a lot of overtime during this project, and I was busy with the little children.

The children started to school when they were school age. We had thought we would probably move back to Los Angeles when they were ready for school, but we were so in love with the place we didn't go. There was no kindergarten then, but they started in the first grade. They went all the way through school, twelve

DeDecker: grades here. We had thought when they were in high school we'd move back because there were only fifty-four students in all four grades of high school at that time. But they did well; they were happy and we were happy. We did have some very fine teachers at that time. So we just stayed.

II ACQUAINTANCE WITH NATIVE PLANTS ON THE SIERRA NEVADA'S EAST SIDE

Help from Prominent Botanists

DeDecker: About 1940, we took our first trip up in the Sierra on horses. And Paul just really enjoyed the fishing. You can only eat so many fish, so I spent the time making notes on the plants that were all new to me. I would write notes about the details of the plants and draw little sketches and then come home and try to find them in Jepson [W.L. Jepson, Manual of the Flowering Plants of California, 192

Holleuffer: Of course they didn't exist in Jepson.

DeDecker: No, Jepson didn't cover this area too well. Oh, I'll go back to the time that we came up here, and I saw these plants that were completely different from those I knew down in the San Fernando Valley. So I tried to use the books that I had used down there, and they just didn't fit the case at all. They were different plants. So I was at a loss to know what they were. I was eager to learn these new things but had no way of doing it.

So I became acquainted with a naturalist in Independence. His name was Mark Kerr.* He was a very sensitive person and really

---

*When the Museum at Independence was started in 1928, Mark Kerr (1883-1950) was the first curator. He made an exhibit of the plants and their uses by the Paiute Indians, as well as mounting and labeling many of the local plants. During the period that Charles Irwin, an anthropologist, was director of the Museum (1976-1982), he edited and published Mark Kerr's manuscript on the Ethnobotany of the Inyo Indians (The Shoshoni Indians of Inyo County, California: The Kerr Manuscript, edited, annotated, and with introductory preface by Charles N. Irwin. Ballena Press Publications in Archeology, Ethnology and History, No. 15. Editors: Philip J. Wilke & Albert B. Elsasser, 1980.) Mark Kerr served in the Seabees in Hawaii from 1943 to the end of World War II. He remained there until his death in Honolulu in 1950.--M.D., October 1985.

DeDecker: tuned in to the plants and the natural scene here. He taught me what some of the plants were, and he suggested that I get a copy of Jepson because it was the only one that covered things at all. And even though it wasn't the best for this area, it was all that was available.

So after a lot of weighing values, wondering if I could afford to put out eleven dollars for a copy of Jepson, I finally did. Then I found I had to learn all these botanical terms that were new to me. We never went into that depth when I was taking biology in high school. So I learned to use the terms and to understand them. But there was still some frustration because there were so many things I couldn't figure out. Mark Kerr again came to the rescue, and he said, "If you are at a loss to know what a plant is, send a specimen down to Dr. Philip Munz at Rancho Santa Ana Botanic Garden in Claremont or to John Thomas Howell at the Academy of Sciences in San Francisco." And he said both of them had been very helpful to him, and he was sure that they would be to me.

I started sending things to them in the early 1950s. And they were so eager to get plants from this area; they were very pleased to get anything I would send them. They told me how to press things and the procedure to follow. They were wonderfully helpful and patient. Well, it just made all the difference in the world because it gave me every encouragement and all kinds of help in handling the plants and encouraging me to send specimens and letting me know what they were.

As time went on, Dr. Munz remarked on several occasions that he was amazed that I could do as well as I did at determining what the plants were without an herbarium.

Holleuffer: Was this the beginning of <u>your</u> herbarium?

DeDecker: No, I had not started an herbarium at that time. I would send specimens out, and I did number them and I did keep a record of them, but that was as far as I went.

Family Backpack Trips

DeDecker: And then, time went on and I just kept at it whenever I had time. Of course our summer trips added a lot to my knowledge of the area. In fact, my best knowledge of the plants in this region were the Sierra plants because we took backpacking trips. We first started out using horses and then eventually found we had lots more freedom backpacking. At that time there was very little in backpacking equipment--things were pretty primitive for that--but we improvised and we had some very wonderful trips.

DeDecker: When the children were eight or so, we took them on trips with pack animals, and then eventually they started backpacking and they just loved it. We had some very wonderful family trips. All this time I was adding to my knowledge of plants in the Sierra.

Eventually the time came when we got into the Inyo-White Mountains more, in the desert ranges. We didn't have four-wheel-drive vehicles in those days, but we were able to do a lot of hiking. We'd go to a roadhead and hike from there. I became fascinated by these desert ranges, and one beauty of that part of the country was that they're open so much longer than the Sierra during the spring and fall seasons. So it came to the point that I liked the desert so much and enjoyed it so much that it almost eclipsed my interest in the Sierra, although I love them both.

Then our daughters grew up, and they went all through high school here, and it came time to go to college. We felt that it would be a disaster to send them to a university with thousands of students, so they went to Pomona College. We had friends who recommended Pomona College, and it was a limited enrollment, and we thought that sounded good. Well, the girls actually chose it. They went down and visited it. Our older daughter, Joan, went, and then the next year Carol was ready to go. In the meantime she was a national winner in a Westinghouse National Science competition and was offered scholarships all over the country, but she had been down visiting her sister at Pomona College and decided that's where she wanted to go, so she did.

Holleuffer: Your interest in science, then, was transferred to your daughter.

DeDecker: Oh, she has a great mind for science.

The DeDecker Herbarium and the Botanical Network

DeDecker: So they went all through Pomona College, and really enjoyed it; it seemed to have been just right for them. Joan was married at the end of her junior year to a young engineer, but she went on to summer school and finished, graduating early. Then Carol, in her senior year, brought a botanist home, a classmate, and he was, of course, quite interested in what I was doing with plants up here. He told me that I should start my own herbarium. He said it would be very valuable--would be helpful to me, it would be valuable to others, and as long as I was collecting plants, instead of sending them out, that I certainly should keep specimens and build up my own herbarium. So I did. That was about 1954, I guess.

Holleuffer: And you now have how many?

DeDecker: Over 6,000 specimens! But he was so right. It has been invaluable. In the work I'm doing now, I just couldn't get along without having it.

Holleuffer: Are these duplicates? You have a type specimen collection, and then you send off others?

DeDecker: I collect these things and, of course, keep the data on where and the date and type of habitat and anything else, and I've sent out lots of duplicates. I've sent many, many duplicates to the Rancho Santa Ana Botanic Garden, mostly because of Dr. Munz. I've sent quite a few to the California Academy of Sciences. I send things in the mustard family, the crucifers, to Reed Rollins at Harvard [Gray Herbarium] because that's his specialty, and he's been very helpful in identifying them. And to others that specialize in a certain field, I try to send them specimens of special interest and plants in their field. And I send to other botanic gardens. Some to New York [Botanical Garden, Bronx, N.Y.], and to Peter Raven at Missouri Botanical Garden in St. Louis.

Holleuffer: Botanists seem to have quite a network around the world.

DeDecker: Yes, they do.

Holleuffer: You all know each other through the mail.

DeDecker: Well, this is an extremely interesting area. We call it the Inyo Region. It's rich in endemics, and it has the mountains and the deserts and isolated pockets that make it an extremely interesting place, and it's remote enough that it hasn't been botanized too thoroughly. So botanists that are dealing in a particular plant family may be very eager to obtain specimens from this area. They may write and ask if I can find a certain plant that they're eager to have, and it saves them a long trip. They're very grateful if I can get it and send it to them.

Holleuffer: So they have want lists that they send you.

DeDecker: Yes, they have want lists.

I remember one time Peter Raven, working on the evening primroses, wanted something for chemical analysis, and he wrote and asked if I would collect it. I thought, "No problem. It grows all the way from Big Pine northward." So the next time I went up, I looked for this plant, but it happened to be a dry year, and I couldn't find it in any of the usual places.

DeDecker: So then I made another trip, and I thought, "Well, I'll go up as far as Bishop and find it," but I didn't find it, and I kept going north. North of Bishop I found a place that was a very likely place for it, but the sheep had just come through. I found half a plant. [laughing] So I kept going north, up toward Fish Slough, which is several miles north, and I did find a few sort of depauperate specimens because it was such a dry year. These were inside a fence, and the sheep didn't get to them. So I sent them to Peter Raven, with some apology because they were pretty poor specimens, and he was so delighted to get them that apparently it didn't matter to him what they looked like! So that's just one example.

I've found that the most cooperative people in the world seem to be botanists. They've always been so helpful if I had any problem plant or needed information. They've just been so supportive and so cooperative. Of course I cooperate with them too, but I'm not a professional, I don't claim to be, and yet they seem to have a real healthy respect for what I do, and I appreciate their support.

I guess the next major turning point--oh, my daughter married this botanist, by the way!

Holleuffer: Oh, that's good. Keep it in the family.

DeDecker: Yes. He's Delbert Wiens, who is a professor of botany at the University of Utah. He's now a worldwide authority on the mistletoes. While we haven't had much occasion to work together, we have had some real good trips together, and he's very supportive. It's nice to have him in the family.

##

Holleuffer: You said that this area hadn't been botanized very much, or to this point hasn't been botanized very much. Who are the other people who are known for the Inyo botany?

DeDecker: Well, there are some who came through here at various times and did quite a bit of work, but as far as the area as a whole goes, there are many places that haven't been explored by botanists.

III DIVERTING OWENS VALLEY WATER TO LOS ANGELES: IMPACT ON THE FLORA

Endangered Species: Sidalcea covillei and others

Holleuffer: Because of the big changes with the drainage of water down to Los Angeles in the aqueduct, do we have good evidence from before the aqueduct, I mean the diversion of water, of what the plants were like? Was it very different from what it is now?

DeDecker: I'm sure it was different. There's very little data on it, unfortunately. As an example, there is a plant here, Sidalcea covillei, which is a mallow and the type locality was Haiwee Meadows. Coville, on his expedition, found it there, and he said it was in the meadow near the house. Well, of course, all that is under Haiwee Reservoir now, which is a Los Angeles water reservoir.

Holleuffer: Coville came through in 1891. He was botanist on a government survey [The U.S. Department of Agriculture 1891 Biological Survey of the Death Valley Region].

DeDecker: Right. Anyhow, there was very little collection of this.

Holleuffer: Did they collect at all on that survey or just describe things?

DeDecker: He collected.

Holleuffer: And where are those specimens?

DeDecker: I think they are in the National Herbarium, back in Washington, D.C. But there was a collection made later. [Brief tape interruption]

When Coville found this it was June 20, 1891, and he found it in Haiwee Meadows, Invo County, in a natural alkaline meadow, directly in front of the house.

Holleuffer: Which is now many hundreds of feet under water.

DeDecker: Now the meadows have been inundated by Haiwee Reservoir.

And then, apparently, there were almost no collections of this plant all through the years until Leo B. Hitchcock found it in 1952. He found it one-and-a-half miles north of Lone Pine, about 200 yards east of the highway in an alkaline meadow along the river bottom. He said there were thousands of plants, nearly a solid stand, but no connections of rhizomes between them. [reading] "The stand at Lone Pine covered several acres and when in blossom resembled a large meadow of Dodecatheon, as viewed from the highway."

Holleuffer: Have you gone to look for that particular spot?

DeDecker: It's wiped out.

Holleuffer: What's in its place now?

DeDecker: It's dried up. The river has been cut off to go into the aqueduct. I've really searched for that population of plants, and that's about the only record in existence of this mallow.

Holleuffer: This is essentially an extinct plant that no longer exists?

DeDecker: Well, I'll go on. I started looking for it. I thought maybe it was completely wiped out. I looked where it had been known. Of course it was gone at Haiwee and it was gone along the river bottom north of Lone Pine. I looked other places and didn't find it. Finally, someone said they thought they had seen a plant up northwest of Bishop, where Horton Creek comes in, that they thought might be that plant. So I went up, and there it was. It was in a meadow that had had a ditch running through it to the stream. The ditch had been dried up, and the plants were showing stress, but they were in what had been a meadow that was being invaded by rabbit brush. It was a drying meadow, but the plants still existed there.

So I became very excited. It was on Los Angeles Department of Water and Power land. I asked them if they would fence it and protect it, and it got to be quite a political hassle before it was over! The Department of Water and Power's so-called biologist got together with someone from U.S. Fish and Wildlife, and they decided they would fence the meadow and divide it into four portions. In one portion they took out all the plants except the mallow and, I don't know, they did something with each portion. Anyhow, if you take out all the plants except the mallow you're exposing it to the hot sun, you're removing the grass cover, and all that. It was the stupidest thing I ever heard of in trying to take care of a rare plant.

DeDecker: Well, since then there have been traces of it found in a good many places. There is some in the Alabama Hills, where there's quite a lot of high ground water and spring activity. Quite a few remnants of it have been found up toward Bishop, in wet pastures. Bishop used to be a very wet place. So I've come to the conclusion that this was a very abundant plant before Los Angeles started drying up the valley, and that what we have now are just little relic populations where there's still enough moisture to keep them alive.

Holleuffer: Is it considered now a rare or endangered species?

DeDecker: Well, Los Angeles has made every effort to have it taken off the rare list. They have even gone so far as to say--they have a biologist that will say whatever she's told to say. So she went to a U.S. Fish and Wildlife rare plant session one time. I couldn't go, and I wrote and told them that I couldn't go, but I had given them my recommendations on all the plants on the rare list. I am a member of the California Native Plant Society Rare Plant Committee. So one of the U.S. Fish and Wildlife men got up after talking to this Los Angeles, so-called botanist, and said that they had found now that this Owens Valley mallow would grow in dry places, and there were many, many populations. He used that as an example that we should be very cautious about putting any plant on the rare list when it might prove to be very abundant.

Of course, when I heard that I nearly had a fit! In fact, I wrote to this fellow and suggested that he touch bases with me before he used some recommendation I had made as a bad example. [laughing] And the place where they said it grew in a dry place--I eventually located where that was, and I went up and looked at it. It was a place that was fed by spring activity, up near the Wilkerson tract, south of Bishop. The surface of the ground does look dry, but the plants growing in this little area with the mallow are all dependent on high ground water, and obviously the high ground water situation still exists because they're still growing, even though it's probably a lot drier than it should be for the best health. As far as these numerous places where it's found, you'll find a half a dozen plants here and a few there, but they're all just remnants.

Alabama Hills is a good example. There's one population in a roadway, beside a road through a tract, a tract of acre plots or so. They're along the roadway, it's a county road, and right in front of the home of one of our Bristlecone Chapter members. She was very thrilled that it was there.

Holleuffer: This is the Bristlecone Chapter of the California Native Plant Society?

DeDecker: Yes, it was in front of the Gilchrist home. So we knew that we had a good watchdog there, that she would guard that population. Well, one week when they were away the county road crew came in and dug a big drainage ditch all along there--not only wiped out the plants but drained the roadside.

Then another place where it was growing, it was kind of a moist meadow, a swale, and it was really nice, it was quite a nice little population of the Sidalcea there. And I went in there one time to check on it and found that the property owner had dug another one of those very deep ditches down at the bottom of the swale to drain it so it could be made a building site.

So that's it. They're going, one by one. They are just wiping out these places, because they have no place in the development picture and they have to be drained. Then even the pumping in the Alabama Hills for private residences is decimating some remnants. So the plant is far from secure. It's just teetering on the brink of extinction because it depends on moist places, high ground water sites. They're going rapidly.

Holleuffer: Are there other ones that you know of that were described before the aqueduct? When was the aqueduct built?

DeDecker: I think it was 1913.

Well, I don't know of any plants that have been actually wiped out. There is a mariposa, Calochortus excavatus. It's one that grows in alkaline places with the mallow. It isn't quite as sensitive as the mallow, but with it too, the sites are being dried up.

One Effect of Water Withdrawal on Habitat: Alkaline Dust

DeDecker: I think the disastrous effect of the taking of water in Owens Valley has just been the general drying up of habitats. The riparian plants mostly have a wide distribution, but when we lose all our riparian sites we're losing a very important segment of our natural habitats, and that's serious.

Holleuffer: I seem to recall also reading in your column that you write in the Inyo Register--is it a once-a-week column that you have on nature in the area?--that you and someone else who had worked in the White Mountains had found that alkaline dust from the upper part of the basin, near Mono Lake, was showing up on the trees in the Bristlecone Forest at 14,000 feet in the White Mountains.

DeDecker: Well, it's not quite that. New York Butte is a peak [10,668 feet high] that's just a little bit northeast, mostly east, of the north end of Owens Lake, and it's a high, exposed peak on the crest of the Inyo Mountains, and on that peak are limber pine [Pinus flexilis]. The bristlecone [Pinus longaeva] are not on New York Butte; even though they're on the eastern slope of it and they're in the general vicinity, they're not actually on the summit. The bristlecone occurs on dolomite or limestone. The summit of New York Butte is sandstone or granite, and there are lots of limber pine up there.

And we drove up there one time [May 31, 1975]--it was over a very rough, four-wheel-drive road--drove up to the roadhead and we were going to hike over into Beveridge Canyon on the east side of the Inyos. When we reached the end of the road, I had the feeling that I was in a fog, and it was very puzzling because it was a bright, sunny day. It took me a minute to come out of this feeling that I was in a fog as I tried to analyze what in the world it was. Then I realized that all the trees and shrubs at the roadhead were covered with a whitish coat and this was alkaline dust from Owens Lake. The twigs and needles of the pine trees were coated, oh, maybe three-fourths to seven-eighths of the way around; there was just a little clear place on the far side of the twigs and the needles.

The mountain mahogany, which was growing there on the edges of the pine area, also had coated leaves. The leaves of mountain mahogany are very shiny and slick, so the dust had sort of peeled off from those fairly well; they weren't completely covered, even though there was a lot of it. But on the pine trees, it was really clinging tightly to the parts of the trees.

So I gathered some and I sent it somewhere, but I didn't find anyone that was interested in trying to analyze it. I did go to some effort to try to get some grad student lined up to study this. In fact, some girl came from, I don't know which college or university it was, maybe it was Santa Barbara. She came to the Bureau of Land Management office in Bishop and wanted to go up there. I had alerted the BLM Area Office in Bishop that this was going on on their land.

So one of the BLM staff was going to take this girl up to see it. Well, the road is very rough, and they got up to the edge of the pinyon and didn't see any on the pinyon trees, so they turned around and came back. Well, I had told them very definitely it was not on the pinyons, so I was a little bit disgusted, and that was the end of that.

What I think happens is that the prevailing west winds go right over New York Butte, and it doesn't take much of a breeze

DeDecker: to pick up this alkaline dust, and all the larger particles, of course, drop out very soon, but this very fine dust is carried high up in the air and sweeps over the crest of the Inyo Mountains. I suspect that there had been a little rainfall so that the surface of the trees was all wet or moist, and as this fine dust blew over it stuck to the moist needles and stayed there. Now, we have no way of knowing how long it stayed there, whether it gradually came off or whether it stayed until another rain washed it off, and those are things that should be determined.

I did go up later, just to check on it some more, and there was no dust at that time on the needles. Then I went contouring around the peak, on the shoulder of the peak or near the summit, and there was an abnormal amount of dead trees. Not only that, but the live trees around the shoulder of the peak had very sparse foliage, abnormally sparse foliage. So I feel that that is evidence that those trees were suffering the impact of that lake dust. How often it happens of course I don't know. But to me it's obvious that this dust is having an adverse effect on those trees, and apparently it happens often enough to do that. So I consider that something that should be taken into account when they dry up Mono Lake because--

Holleuffer: Now, this was Owens Lake that was putting out the--

DeDecker: This was Owens Lake, and Owens Lake has been dry for a long time. Now, Mono Lake--

Holleuffer: I've seen terrific dust storms over Mono Lake.

DeDecker: Oh, I have too, and of course I've seen it greatly increased since the lakeshores have been more exposed. There's an awful lot of exposure there of the alkali surface as the lake has been increasingly dried up, and the least little whiff of breeze will just take that dust up in a whirling cloud. So the bristlecone pines, the ancient pines in the White Mountains, are east of Mono Lake, and that is the first major mountain barrier east of Mono Lake. If this affects the trees on the crest of the Inyos out from Owens Lake, it's something to think about, having this alkali exposure in Mono Lake that would directly blow over the crest of the White Mountains where these ancient trees are.

Holleuffer: Now, in the White Mountains we do have the U.C. Research Station.

DeDecker: Yes.

Holleuffer: Hopefully, they'll monitor this sort of thing.

DeDecker: Well, it was kind of interesting. We were just getting into this controversy over pumping in Owens Valley--this was probably the late seventies, yes, the late seventies--and the Washington Post called up and wanted to know if I could give them anything for a story for their paper, and they said, "We want something of national significance, not just a local thing."

So I said, "Well, I think it would be interesting that this could develop into a threat for the ancient trees in the White Mountains." I told them what I had seen, just briefly, and I said, "If Mono Lake is increasingly dried up and creates a major dust problem and it blows right over these ancient trees and affects them like it does the trees on New York Butte, man might, in a hundred years or so, wipe out trees that have been existing for thousands and thousands of years, and that's something to think about."

Holleuffer: Did they write it up?

DeDecker: Yes, they did. I didn't see it. Of course we don't have any way of seeing that paper. Duane Georgeson, the chief engineer of the aqueduct, called from Los Angeles. And at one time Duane and I were real good friends, until I started taking a stand against what they were doing to Owens Valley, so then he became very irritated with me, but he is a very intelligent, bright person. He called and said, "I have a copy of the Washington Post here. It quotes you." And I said, "Oh, did it? What did it say?" So he read it to me, and he said, "Is that a correct quote?" and I said, "Yes, it's exactly what I told them." He said, "Well, we certainly would appreciate it if you had told us before you gave it to the news media, told us of your concern." I said, "Well, I had no reason to believe you would be the least bit interested." He hung up the phone, and he's never called since!" [laughter]

But that's what you were referring to anyhow. And I think it is something that should be taken seriously, because I saw what I'm convinced were the effects of the dust problem up there on New York Butte.

IV OWENS VALLEY STRUGGLE AGAINST LOS ANGELES DEPARTMENT OF WATER AND POWER

Environmental Impact Report for the Second Los Angeles Aqueduct

DeDecker: I started, way back, to say that another turning point in the plant picture, as far as I was concerned, was when the California Environmental Quality Act [CEQA] was enacted [in 1970], requiring environmental impact statements. Of course we're so far from any university or any source of such knowledge that all of a sudden here was the east side of the Sierra with things going on that required environmental impact reports, and there was no one available but me to know what the plants were that they were talking about!

Anyhow, I was called on for many projects, just because there was no one else. Fortunately, I did know the plants and have been able to be very valuable in that way. But that suddenly sort of brought me into the limelight, where otherwise I wouldn't have had any particular role in all that was going on.

##

When the environmental requirements came up, there were lots of needs for someone who knew the plants in the area, and there was really no one but me who was available. If it had been around a university or college, there would have been people, grad students, or undergraduates even, who would have been available, but here there was nothing. Even people working for the public agencies, such as Forest Service and the Bureau of Land Management, just didn't have any botanists. Anyone who was available at all seemed to be more interested in animals than plants.

So when Los Angeles put in the second aqueduct, the second barrel, as they call it, it was completed just after the California Environmental Quality Act was passed.

Holleuffer: What year was that?

DeDecker: I think it was 1970. It was about that time. And the county of Inyo became alarmed over what this meant. When Los Angeles started in to build the second aqueduct, they went to the chambers of commerce--those are the people they always contact--and told them that there was nothing to be concerned about, all this aqueduct would do would be take surplus water that would otherwise go to waste, so there was no reason to be worried about it.

Well, I was worried about it, but I was in no position to have any input on it, and the public officials didn't seem to be alarmed at the time. But after the aqueduct went in, then they started diverting water into the aqueduct that had been left alone before. They were drying up springs and sloughs and were doing things that began to worry the people living here.

So Inyo County finally started suit against Los Angeles to require an environmental impact report. Los Angeles claimed that they didn't need to follow the laws of CEQA because the aqueduct was constructed--in fact, it may have been completed--before CEQA went into effect, but they didn't start using it until after it did. So the court upheld Inyo in saying that the DWP had to have an environmental impact report. Then, to do that, they needed a vegetation study, and so they asked me if I would do it. They knew I had a pretty good reputation, and I guess they figured they would use me to give them credibility.

I didn't want to get involved in something where I had to hire people to help. I knew that I couldn't do it alone, and I didn't want to be in the position of hiring people and writing the necessary reports and things. So I told them that I would do the work on the local scene if they would hire some consulting firm to head it, and I would work for them.

The Department of Water and Power and the City of Los Angeles hired Earth Satellite in Berkeley to be the consulting firm to do the vegetation study, and I did a lot of the ground work in Owens Valley, with the help of one or two of their field people, and I felt pretty good about it. We were limited for time, but we did a reasonably good job. And I, at that time, felt that the knowledge gained from the study would be used to advantage. In fact, when the Los Angeles people asked me to do it, they told me that with this information they could rotate pumping and avoid impacting any particular area too much and all these good things.

In reality, when the study was finished, the Los Angeles DWP falsified the results and tried to twist it to their advantage.

DeDecker: I became completely disillusioned when I finally realized that they were doing this deliberately, not out of ignorance or anything like that.

When Inyo County Board of Supervisors first filed suit against the Los Angeles DWP and was--well, the case finally reached the appeals court, the Third Court of Appeals, and the DWP was making one big effort to get judgment against the EIR [environmental impact report] requirement. First Inyo got judgments saying that an EIR was required. When the DWP finally submitted an EIR, we complained that it was not adequate, that the definition of the project was misleading, and there was a lot that was bad about it, including twisting our input.

Finally, I was so disillusioned by that time that I joined in and gave testimony against the Los Angeles DWP, and my testimony was pretty damaging because they had hired me to do this job. So then they tried to say that I was good on taxonomy and knowing the plants, but I didn't know a thing about plant communities and therefore they shouldn't take me too seriously.

So then in some agreement between Los Angeles and Inyo, probably as ordered by the Court of Appeals, they decided they would get some impartial professional people in to make judgment on who was right or wrong in some of these arguments. So they got some of the--

Holleuffer: Now, who hired these professional people?

DeDecker: I think maybe it was Inyo County, but I'm not sure. Or they may have both contributed to this. But the EIR and comments on it were sent to authorities in the various fields, including botany, for judgment. Instead of siding with Los Angeles against that person in Owens Valley that didn't even have a botanical degree or anything, these professional people upheld me very strongly. They said I was right on all that I had said and that Inyo was very fortunate to have someone on the scene who understood the vegetation so well. So now Los Angeles, since that time, has absolutely refused to ever hire any impartial professional people to make judgment on anything!

Holleuffer: Only partial people. [laughter]

DeDecker: Yes.

Holleuffer: Previously disposed to their point of view.

The DWP and Inyo County Politicians and Press

DeDecker: And that was eleven years ago, when the Court of Appeals in Sacramento first ordered an EIR. The Los Angeles DWP has since produced two, and they're thick books, and the court has not accepted either one of them. And now Los Angeles has trapped Inyo County into this agreement, and by doing that they thought they were going to evade the EIR requirement. Our Inyo County officials are ignorant: they're naive, and they're not--well, they have a very limited base of experience. Our own supervisor was a cook and a bartender in a small town cafe all his career, and now he's making big judgments that are affecting our whole future about things that he just isn't qualified to act on, and yet he will never admit he's wrong. He goes to Los Angeles and these slick PR men pat him on the back and tell him how wonderful he is, that he's the only one who can understand the situation and that they're depending on him and he's such a great person. He just falls for it, hook, line, and sinker. And those of us who dare question it are put on the blacklist, including myself.

Holleuffer: How many supervisors are there?

DeDecker: We have five supervisors, and sometimes I wonder if the IQ of any of them is 100! But regardless of that, their backgrounds are so limited. One fellow ran a service station, and, you know, that's not a very broadening background. They're very suspicious of anything that resembles professionalism, and they resent very much anyone who knows more than they do on any subject, and that's an awful lot of people. So it's pretty discouraging.

Well, anyhow, to come back to this agreement. Our supervisors made commitments to Los Angeles before even bringing it forth to the people of Owens Valley, and we have a lot of well-informed people in Owens Valley. Of course Los Angeles didn't want it to be brought before the people until they had it all sewed up. So they persuaded the supervisors that they knew best, better than the people, what was good for Owens Valley, and to keep the people out of it because they would just mess it up.

So the first thing we did was to get this news reporter, this very perceptive, analytical woman reporter--

Holleuffer: You can name names, it's all right.

DeDecker: All right. This is Benett Kessler for the Sierra News Service, and she had exposed some of the things that the Department of Water and Power had tried to pull before, so they felt they had to get rid of her before this agreement was reached.

DeDecker: About that time the radio station in Lone Pine that she was on changed hands. It's under a Department of Water and Power lease, so the land agent for the Department of Water and Power informed the new people at the radio that they would not sign the lease until she was put off the air. So she was put off the air in September, 1983. Everyone knew the agreement was supposed to be finished, but they couldn't figure out why it wasn't released. Well, the day that she was off the air they released this agreement, and we were in more or less a news blackout.

Holleuffer: The newspaper only comes out three times a week?

DeDecker: Well, at that time the Chalfant Press paper came out once a week, and a daily paper, the Sierra Daily News, was five days a week. But the Department of Water and Power had really worked on these papers and had them pretty well brainwashed, and it took--well, the Sierra Daily News eventually woke up and began to realize that Los Angeles had really hoodwinked the people of Owens Valley, and they came through and gave some pretty good news coverage from then on. Chalfant Press was more cautious, and they apparently were afraid of offending Los Angeles too much. While they gave fairly good coverage, it was always a little bit cautious. But when Benett was put off the air, it seemed sort of like a news blackout. It was in southern Inyo.

Holleuffer: What time are we up to now? What year?

DeDecker: I'm leaving out things! This was 1983.

Water Meters in Owens Valley: A Vindictive Act

DeDecker: I'm going back now. When Inyo County filed suit against the Los Angeles DWP in the request of an EIR, then the City of Los Angeles, who had always been very arrogant with the Owens Valley, just to show us that they were in the driver's seat and that we couldn't get away with being so independent, they put meters in our towns in 1980--in Lone Pine, Independence, Big Pine, and Laws--because they owned the water companies. So they put meters in our town and jumped from a flat rate of $8.40 a month to metered rates, which they said were the same as they were in Los Angeles. They claimed that they had to charge us the same as the people of Los Angeles because it was the same water system.

Well, of course, to me, they're very different water systems, but they say whatever they want to say and have the power to get away with it. It was a vindictive act, and they got away with it. For some reason, Inyo never took that to court, and I still feel

DeDecker: that they should have. I think they could have proven that the Los Angeles DWP had no right to charge us this rate because these were different systems, and we are at the source of the water and why should we pay the same as Los Angeles; they have to transport it 250 miles to get it down there. But regardless of that, our water rates jumped from a flat rate of $8.40 to--

Holleuffer: That's $8.40 a month?

DeDecker: Yes.

Holleuffer: For unlimited use?

DeDecker: Yes, unlimited use. But they jumped to a metered rate, which in the wintertime isn't bad, but in the summer--Paul and I are very cautious, we've never been wasteful, we have two lots, and we raise a garden in the summer, but he's very careful about changing the water and making sure that he doesn't waste water. In fact, you can't afford to now. We don't have any teenagers taking showers, requiring laundry, and all that extra water, just the two of us, and our water bills were fifty dollars or more a month in the summer months. They're not that much in winter, but it makes it a real hardship in carrying our place through these hot summers.

The first summer that we were metered we had, I think it was, six weeks that the temperature didn't drop below 100 degrees, and we never have any dew. The soil is largely decomposed granite from the alluvial fan, so it's very porous, and it just takes one heck of a lot of water to keep plants alive. We lost a peach tree that summer because it was just too hot and dry. Most of the people in town just gave up. They didn't try to keep their lawns or their shrubs alive because they felt they couldn't afford it. The shock of that sudden increase in water bills just--well, they just didn't try to keep things alive.

Now, Paul and I gave that priority. To us, having a green spot where we live is very important, and that was a priority, and we could afford it. But a family with children, who have to put feeding the kids and clothing them ahead of keeping their yard green, just let things go. The sad part of it is that this used to be sort of a garden spot. Independence has always been noted for its nice gardens and yards and lilacs and things, and to see it--

Holleuffer: Looking out the window right now, I can hardly see a green thing growing!

DeDecker: Well, of course this is wintertime. But anyhow, it has been very, oh, sort of demoralizing. Some of the elderly people who grew gardens, vegetable gardens, as sort of good therapy for them, besides saving on the grocery bill, they could no longer afford to do that. So it's been a very sad state of affairs.

Holleuffer: Although it is just a continuation of the long story of Los Angeles coming up and taking the water.

DeDecker: It's all part of this battle.

Holleuffer: It was Mark Twain I think--I'm paraphrasing him, I'm not quoting him exactly--but he said, "Whiskey is for drinking; water is for fighting about." [laughter]

DeDecker: That's just about it.

Holleuffer: And that's certainly what they do out here.

DeDecker: Well, then, during that time [1980] there was a group in Lone Pine that started up. They called themselves the Concerned Citizens.* Unfortunately, they were not too well informed on water matters, but they were very sincere, and they were trying to fight this. One thing they did, as sort of a gesture, they went up and down the valley and tied red streamers on the dead trees along the highway. They fought the meters, but of course they didn't have the power to win.

I helped them. They came to me and wanted my help. So I joined them and participated in putting out newsletters and things to try to--we did do a lot in getting the word outside the county, what was going on. We sent newsletters to people, biologists and university people all throughout the state, and did get a lot of information out about what was going on, which made it very difficult for Los Angeles to answer some embarrassing questions.

Devastating Effects of Ground Water Pumps

Holleuffer: I was just going to say, I wonder if we could shift gears for a minute, because I would like to get back to the plant communities in the area. Maybe you would like to talk about your work on the Eureka Dunes, which are now a National Landmark--is that the correct designation? [Also designated by BLM as an Area of Critical Environmental Concern. M.D., November, 1985]

DeDecker: Well, the plants--this is a very, very important part of the water issue. They started the groundwater pumping program to put water in the second aqueduct, which we didn't consider surplus water, but with Los Angeles, whatever they want to do is what they claim.

---

*cf. Stegner, Wallace & Page, American Places, "There it is; Take it." On p. 175 they speak of the Concerned Citizens, and on p. 177 they quote DeDecker.

DeDecker: So they were pumping water to the point that we were very much concerned. They did admit that they would kill some of the native shrubs. But instead of rotating the pumping, they concentrated it all in a few main well fields, including around Independence, between here and Lone Pine.

So they caused a cone of depression around these wells that just devastated very large areas and killed the shrubs. Well, within a ten-year period, I don't know, I think it went into thousands of acres, the shrubs were killed. Of course that's created dust problems, it's very serious in terms of ecological values. It wipes out habitats for all kinds of animal life. It's just a very ugly, sad state of affairs.

When they started doing this and admitted that they would kill some of the plants, they said, "Well, don't worry about it because the desert plants," they called them, by which they meant the plants on the alluvial fan, "will come down and replace those that died down there because they don't require ground water." I said, "Well, that is not so, because the plants that are on the alluvial fan are there because they require good drainage, they can't stand the alkali down on the valley floor, and they're just not adapted to conditions there."

Well, they claimed that, and they put that in their EIR statement. So that was one of our bones of contention. We told them absolutely that would not occur, and yet they insisted on saying it, and they told our county officials that.

The plant community on the valley floor is greasewood scrub, which is tolerant of alkali. It can take these heavy clay soils, it can stand intense heat and an awful lot of cold. They've adapted to all of these unfavorable conditions or a combination of them, while plants that aren't adapted to those things just can't replace them.

So then the plants along the base of the fan--you get into saltbushes, different species of Atriplex--and they all have different requirements for water and tolerance to alkalinity. So by understanding those plants, the different saltbushes, you can pretty well tell what's going on, because they're indicator plants. Well, great areas of Nevada saltbush [Atriplex torreyi] out here, south of town, died. That is one that responds very quickly to water withdrawal, so if you notice those plants dying, you know that water is being withdrawn pretty fast.

So that's sort of the picture on plants. We've lost an awful lot of native vegetation, and there's no effort to do anything about it.

Holleuffer: The land is owned, isn't it, by the Los Angeles Department of Water and Power? The valley part?

DeDecker: The land on the valley floor, most of it is owned by the Department of Water and Power, and they claim that gives them the right to do what they please: "It's our land, it's our water." And yet they're affecting land that doesn't belong to them and they're affecting the lives of a great many people who are not their subjects. We don't have a vote on what they do, and yet they're charging us Los Angeles rates. I mean, the whole thing is a very arrogant state of affairs.

Holleuffer: Taxation without representation.

DeDecker: Right. And they give huge amounts of money to the Los Angeles General Fund, money that they collect from water bills.

Holleuffer: And they don't have to redistribute that back up here, in accordance with how much came from here?

DeDecker: No. We've never sued them to demand it. We should.

Holleuffer: Why not?!

DeDecker: Well, that's what I say. But they collect water receipts from us, water and electricity, and they give it to the Los Angeles General Fund without any accounting for it to us or any representation from us or word from us.*

---

*See Appendix A for additional comments on the Los Angeles Department of Water and Power.

V FIGHT TO SAVE EUREKA DUNES

Location of Eureka Valley and the Dunes

DeDecker: Well, do you want to talk about the Eureka Dunes?

Holleuffer: Yes.

DeDecker: The Eureka Dunes are on Bureau of Land Management land.

Holleuffer: Let's describe just about where they are.

DeDecker: They're in Eureka Valley, which is really a basin without any drainage, but there's no water either! Eureka Valley is a valley just north of Saline Valley, and it's between the Last Chance Mountains and the Inyo Mountains on east and west, and on the south it's the Saline Range, which is between Eureka Valley and Saline Valley. And just across the Last Chance Mountains is the very northern end of the Death Valley drainage. The Eureka Dunes are in the southeast part of Eureka Valley, and the northwestern corner of Death Valley National Monument is just a matter of a few miles from the Eureka Dunes.

##

BLM Advisory Committee: Recreationists and Conservationists

Holleuffer: Yesterday, as we finished up, we were just starting to discuss the Eureka Dunes. This is an area on BLM [Bureau of Land Management] land that was subject to a lot of degradation by off-road-vehicle use, and Mary was on a study committee, sometime in the 1960s, I believe, to see what could be done to protect the dunes.

DeDecker: Our attention was focused on Eureka Dunes first when BLM and other agencies were beginning to work on some kind of control of off-road-

DeDecker: vehicle use. All the agencies [Forest Service, BLM, Park Service, and Inyo County] were becoming concerned over the damage done by off-road vehicles, and of course the public was demanding that there be some control in various places.

The Eureka Dunes, being extremely high for sand dunes--they're almost 700 feet high--was a favorite place for off-road-vehicle activity. It's remote, and yet people go out there and have big events and gatherings and just run all over the dunes. The distressing part to those of us who appreciated the uniqueness of those dunes was because of the unusually rich flora and fauna there; of course, vehicular activity was very destructive.

As time went on, we found there were three endemic plant species there, a number of endemic insects, and probably other things yet to be discovered. So we opposed the activity. I think this was possibly as late as 1970. I don't know the exact year, but it was just before the California Desert Plan. So the Bureau of Land Management designated a committee of five people to be an advisory committee for working on a plan for the Eureka Dunes as a place of special interest.

On that committee there was a man from Deep Springs who represented the Sierra Club. This was John Mawby. And there was a woman from Bishop who represented off-road vehicles' use of the dunes. And then there was one man representing what was supposed to be passive recreation; he happened to have some interest in hang gliding, and they were doing a little bit of that. The woman I mentioned was representing dune buggies' type of activity. Then there was an aggressive man representing motorcycles. And myself.

Holleuffer: It sounds sort of weighted in favor of recreation!

DeDecker: It was weighted for use, of course, and that's the way most of those things were going in those days.

The man representing motorcycles was very demanding and very belligerent over any suggestion of controlling such use. Their attitude was, "Well, by God, we invested in these machines, and we're going to use them, and we have a right to use them." So they, of course, were completely insensitive to any damage they did. They claimed they helped the dune system by stirring up the sands, so seeds would be covered and--. [laughter] Their rationale was a little ridiculous.

I realized right away that I was very much outweighed by the other element, and unfortunately John Mawby, representing the Sierra Club, was very low key. He really didn't take much of a stand. He felt that it was a hopeless situation, and he wasn't a bit aggressive about it. So I was sort of alone; I didn't

DeDecker: get much help from him, where I should have. But he was a geologist, and probably not quite as much tuned into the living things as I was.

So we started out, and I was a strong advocate of some kind of compromise. I felt that if we could get some kind of compromise, it was the best we could possibly hope for, and I wasn't very optimistic about that. So we had a number of meetings, and as ideas for compromise, I suggested first closing the dunes during the germination period of plants, from, oh, perhaps the end of January to summertime. And they said, "Oh, we can't do that, we can't consider that because we have to have our activities during Easter week." So I then suggested maybe having one side of the dunes closed, or the big dune mass closed, and one side left open for their activities. "Oh, we can't do that, because we want to run all over the crest of the dunes."

So everything I suggested, that was their answer. They wouldn't tolerate any restriction on their activities. They wouldn't even consider a compromise. They wanted what they wanted, and we were supposed to be content with what they didn't want, which wasn't much.

So my stand was that the main dune mass--the sand mountain they call it, which is the high northerly part of the dune and probably about one-third of the area of the dune--that that was the "mother dune" of the whole dune system. The endemic plants and any endemic life there depended on this big massive sand mountain, because it retained water and fed it out during the drier part of the season, so that it maintained this very rich plant community.

The Dunes--A Place of Special Interest

DeDecker: The Eureka Dunes are on the west side of a mountain barrier, the Last Chance Mountains. It's an impressive wall just east of the dunes, and any clouds from the prevailing westerlies that come into Eureka Valley and are caught on the Last Chance Mountain barrier will always spill a little water on the dunes. They're so close that the dunes benefit from any precipitation that is caught by the Last Chance Mountains. Therefore, they get an unusual amount of water. So many of our dune systems, at least in this area, are on the east side of the mountain barrier and are in the rain shadow of the mountains rather than on the favorable side. So that makes a great difference in the precipitation.

DeDecker: Also, these are extremely high dunes and the very massive mountain of sand stores an awful lot of water. It's like an aquifer above ground. The rain and snow trickles down through the sand; it doesn't run off, it's all retained in this sand mass and it gradually percolates down through it and is fed around the base to plants through the summertime.

Around the dune is what we call a sand apron or a perimeter of sand all around the base of the dune, and that's where most of the plants occur. Very few plants can grow up on the pure sandy dune surfaces or soils above the base because it's not a favorable place for plants. But the Eureke dune grass [Swallenia alexandrae] does. It grows almost to the 700-foot summit of the dunes and has a deep root system. There's one other plant which is not rare, but it's important in the dune ecosystem; it's Dicoria canescens, subspecies clarkae, an annual. These two plants grow very high in the dunes. All the others are down either on the sandy apron around the dunes or very low on the dune slopes.

Of course, the running around with vehicles was pretty hard on the plants. They did avoid the clumps of dune grass because the leaves were a little bit prickly and they didn't like to fall into them. But they did spin out dune grass seedlings all over the dunes, so there was very little reproduction from seed while this activity went on. And of course the endemic evening primrose--Oenothera avita, subspecies eurekensis--was very susceptible to damage by wheeled activity.

Holleuffer: It said in an article about the dunes that there were two plants that were found to be on the federal list of endangered species.

DeDecker: Yes, the Eureka dune grass and the Eureka evening primrose.

Holleuffer: And then some fifty rare plants.

DeDecker: Not fifty rare ones, fifty plants.

Holleuffer: Oh, fifty plants.

DeDecker: Yes. There are over fifty plants, I think about fifty-five that I listed, that occur on this dune island in the sandy portion of the dunes. That does not include the plants that grow outside the perimeter of the sand, such as creosote bush and things. So that is a very rich plant list for a dune system.

For instance, there's a similar dune system just over in Nevada, not too far away. They are the Clayton Valley Dunes, not as massive, not as large. They are on the east side of the mountain barrier, over by Silverpeak. I think I came up with a

DeDecker: list of four plants there, including Russian thistle, which has been introduced! So there's a big difference between four and over fifty species in a sand dune ecosystem.

Some of these insects, we think they've developed since Pleistocene times, have been isolated through the time period since then, and some of the insects are wingless. They don't need wings because they're confined to the dunes. And we think that these endemic plants have developed since that time, and they're certainly well adapted to dune life. And the other plants on this list of over fifty are species which are adapted to sand dune ecosystems. So it's a very rich and interesting place.

Now, there's still much to be learned from the dunes. We think that the hydrology of the dunes would make a really fantastic study. The playa at the northwest part of the dunes is part of the original Pleistocene lake, and the lake borders can be seen around what was the old lakeshore. And there's lots of evidence of ancient man there. There are some parallel rock lines out away from the dunes on the alluvial fan about 200 feet long and about 5-1/2 feet wide. There are two of these outlines.

Holleuffer: Are these where rocks have been placed in these lines?

DeDecker: Yes, rocks have been placed in these lines, and across these parallel lines there are a few lines across. My attention was attracted to these outlines--they are not very well known because they are away from the dunes, fortunately, and they're on the alluvial fan--when I was there with my daughter, Joan, and her children one time. Our grandson, who was junior-high age and very much interested in Indians in this part of the country, wondered if there was some evidence of Indians there. I saw these white deposits up on the alluvial fan and I thought, "Well, that could be travertine or some hot spring deposits," from springs which of course no longer existed.

So I suggested we go up there and look around that place, and that's where we found these rock outlines and also a rock circle and other interesting things. So apparently this was in existence at a time when there was some kind of a spring flow at these white outcroppings.

BLM Plan for the Dunes: Protection for ORVs, not Plants

Holleuffer: Now, after you discovered all these wonderful things about the dunes, how did you manage to oppose the other members of the committee?

DeDecker: [laughing] Well, of course none of this was any reason for protecting them, as far as most of the committee was concerned.

Then finally my last effort for a compromise, and they seemed to go along with this, was to have a--there's a little peak at the south end, not really a peak but a higher point, and then a sort of a saddle just north of that high point, and then the crest of the ridge going northward. I asked if we couldn't have that saddle as a dividing line and keep the vehicles off the far south end of the big dune, and at least preserve some part of it in its natural state. They seemed to feel that that would be agreeable because, after all, they had been left a major part of the whole big dune.

There's a lot of dune grass [Swallenia alexandrae] on the west face of the dune. It's a very steep face, and it's semi-stabilized because there's a lot of dune grass growing almost to the top, and that's one feature that the botanists felt was pretty important. It was so steep we didn't worry too much about it because we didn't think the vehicles would use it. But before this was over the vehicles were going along the top and coming down that steep slope. It was pretty dismaying to see them doing that. We began to feel nothing was safe.

So the crisis came when we had a meeting [October, 1978] of the dune committee and the manager of the Bishop Area [BLM] office. The Eureka Dunes were under the jurisdiction of the Bishop Area office at that time, but it's now under the Ridgecrest Area office. But that was before the desert plan. The manager of the Bishop office, Ben Collins, came to the meeting and said, "Well, tonight we have to decide whether to have competitive events here." And I was just shocked at that idea, and even the woman who represented dune buggies didn't want that. She said, "Oh, we don't want that." The local people sort of considered the dunes their private playground, and they didn't want crowds coming in and taking over, so she was very unhappy at that proposal too.

So I said, "Well, why do we have to consider that?" He just kind of shrugged his shoulders and said, "Oh, we have to consider it and we have to decide whether we want to have that or not." And I said, "Why do you have to consider that? That is so outrageous, we shouldn't even think about it!" [laughing] "Do you have any idea what just the crowds that would gather would do to this place, let alone the activity." And he just laughed and he--well, I don't think much of him because anything that I thought was serious he just laughed about it.

So we talked about it a little bit, and in frustration I said, "Well, if we're going to get into this sort of thing, I'm going to have to do my work outside this committee because this is just

DeDecker: going too far." And he never did give me a reason why they had to consider it. I asked him repeatedly, and he just kind of laughed and shrugged his shoulders. So we never had another meeting. I had no intention of going to any more meetings, but they didn't have any more.

That was in probably October, 1975. It was in the fall sometime, late summer or fall. And just after the first of the year, 1976, BLM sent out a plan, a management plan, for the Eureka Dunes, and I just couldn't believe that it was so bad. The Bishop area office is under the Bakersfield office; it's in the Bakersfield district. So the plan came out from the Bakersfield office, and it was signed by a man who was just one of the staff, not the manager of the office. I happened to know this man; we'd been on pretty good terms. He had been transferred there not too long before from Riverside.

What they had done was to leave the entire north end of the dunes, the big sand mountain, completely open; none of it had been reserved. That was a point that I was trying to make all through the planning process, the importance of protecting some part of that "mother dune", as I call it. They had closed the larger area of low dunes on the south end. These lower dunes were a little larger in area than the big dune, spread out more, but they were only about one-third as high as the big dune, and you could not even get to them without a dune buggy! So that was left open for other recreation, which was completely out of reason. And of course all the values of these endemic plants and most of the vegetation was around the big dune system, very vulnerable to all this activity. BLM was to protect only the part that the ORV people didn't want.

So I went through the plan and I just marked my reaction to each paragraph, and I said, "This is misleading," "This is deliberately misleading," "This is a lie." [laughing] You know, I expressed my opinion of how bad it was. So then I called the man who had signed it on the phone, and I guess he detected a little ice in my voice or something, because we were friendly. He said, "What's up?" And I said, "Well, I just want to know what you think of this plan that came out over your name." And he said, "It looked all right to me." He had hardly been out to the Eureka Dunes! So then I started in to tell him what I thought of it, and he said, "All right, all right." I said, "I'm going to send it back, I'm going to blast it every way I can, and I'm going to do everything I can to overthrow it." He said, "All I ask is just don't get personal." I said, "Well, I don't need to get personal because the plan is so bad it speaks for itself!"

Enforcing a Ban on Off-Road Vehicles

DeDecker: So nothing happened for a while. I didn't get any reply or acknowledgement to my comments when I sent them back. But then I was over in the spring, May 7-8, to a Southern California Academy of Sciences meeting in Santa Barbara, and there were a number of papers presented on the effects of ORV [off-road-vehicle] activity. I was there and I gave something on the Eureka Dunes.

A group of us went out to dinner that evening, and I happened to sit next to a man from the Sacramento office of BLM, the state office. I'd never met him before, but he obviously knew who I was. As we sat down for dinner he leaned over and whispered in my ear that the dunes were going to be closed, but they would have to wait a while and go through the saving-face process of a little more study. [laughter] So I didn't hear any more then until it was, I believe, October 1976--it was late in the year--and they came out with a plan saying that "after further consideration and more study" they were closing the entire dune system to vehicles.

Well, of course we were elated over that. It was more than I had ever hoped for. We just were very happy about it. But before long we realized that BLM had no intention of enforcing the closure.

Holleuffer: It's a pretty isolated area.

DeDecker: Yes. So it was not too long before the ORV people realized that nothing was going to be done about it, and they started gathering again. There was a little pause there in the activity, but then they started coming in. It was sort of a belligerent attitude they had that nobody was going to keep them off the dunes, and they had what they called "events."

The first Easter [1977] went by; Easter season was the worst time of the whole year. I didn't get out there that year during Easter week, but I heard some pretty wild reports of what had gone on, reports of wild activity. So the next year I made a point to be out there. We were camped at the north end of the dunes, and just a little bit away from us, maybe a quarter of a mile, maybe not that far, was a big gathering of vehicles. They kept coming in, more and more, til it was a real big group of people camped all in one place. And there was a lot of noise going on, but it really didn't open up until the sun went over the mountain, and then the people started revving up their machines. There were not only dune buggies, but there were pickups and jeeps roaring around the perimeter of the dune, riding over the plants, caving in the rodent holes; it was just like a nightmare.

Holleuffer: And there were no officials out there?

DeDecker: No control whatsoever.

##

Holleuffer: From 1977 until I guess it was 1984 there wasn't any way of protecting the dunes.

DeDecker: I don't remember the years, but BLM made no move to protect them until that Easter that I was out there. I then wrote this article in Fremontia about it [Vol. 7, No. 2: 6-8. July, 1979]. I was horrified at what went on, and there had been no effort--BLM had promised they would have people out there Easter week and nobody was around.

Holleuffer: Fremontia, excuse me, is the journal of the California Native Plant Society [CNPS].

DeDecker: Yes. And the dates of course are in there.

Anyhow, I decided I would write an article about it, and I did. My article is entitled, "Can BLM Protect the Eureka Dunes?" Then they asked the man who was head of the Bakersfield office--I should remember his name [Louis A. Boll]--they asked him for his side of the story. Well, all he did was give a few weak excuses, and it was printed in the same issue of Fremontia [Vol. 7 (2): 8, 1979].

Anyhow, that article brought forth enough reaction and pressure on BLM that they then started to give some protection by having the desert rangers go out. They have a ranger, Bruce Albert, who lives in Big Pine, and he's very good. He's not belligerent, but he's firm, and he goes out and he can talk to them without--he tells them, "These are closed, and we'll give you a chance to get out, but if we have to give you citations, we will," and he has done it, and it has made a world of difference. The dunes now--occasionally you find tracks out there, but in general it's pretty well under control.

I should go back to fall, 1975, when I quit going to BLM's Eureka Dunes Special Design Committee or told them that I would work outside the committee. So I started a letter-writing campaign. I wrote to botanists across the country, anyone that I thought would show an interest in protecting the dunes, lots of biologists. Then a man who lived in Bishop who was active in the Sierra Club, Roland Enfield--he had been interested in the Eureka Dunes, and I asked him if he didn't want to help us. So he got on it, but anything he went into he did very much as a personal project, which was sort of irritating. I had had experience with him in the museum and found that it was very necessary for him to get a great deal of

DeDecker: ego satisfaction over anything, but I did appreciate his help a lot. And altogether apparently BLM really felt the pressure.

We even went up to the Bishop office and asked to see the correspondence that had come in on the dunes. There were a few letters from ORV people, and most of them were half illiterate, and very demanding, and very belligerent. And the people who were asking that the dunes be protected gave intelligent reasons. It was very interesting to see the contrast. There were many, many more letters asking for protection than there were to keep them open. All the time BLM was pretending that there was all this pressure to keep them open. Well, the pressure was very vocal and very belligerent, but really those who wanted protection far outnumbered the ones who wanted them kept open.

The whole thing was an interesting process of the public expressing itself on a very hot issue. I was sort of surprised after it was all over. While I spearheaded the thing because I happened to be in the position to do it, I wasn't the least bit interested in the credit for it. All I wanted was to see the dunes saved. Of course, we were all thrilled when we felt we finally accomplished this.

And Roland Enfield--this is sort of interesting--he sent out personal letters to people that he had contacted, thanking them for helping him in his project. [interviewer laughs] He died not long ago, about a year ago. I was kind of amused to see an article in the Sierra Club newsletter from the Toiyabe chapter, and this came from Reno, speaking of Roland Enfield as a great conservationist, which he certainly did a lot for--I don't question that--but saying that he almost singlehandedly saved the Eureka Dunes! [laughing]

I'll end this by saying that I consider the Eureka Dunes a shining example of what can be accomplished over overwhelming odds if people really take a stand on something. I think it's really an outstanding example because it just looked impossible at the time to accomplish this. And it was done, not by me, but by all the people that cared about that kind of an issue and natural habitat.

VI DISCOVERY OF *DEDECKERA*: A NEW GENUS

Finding a Strange "Buckwheat" in a Remote Canyon

Holleuffer: Well, on that note I might interject here that I believe there are two species on the Eureka Dunes that are named after you, two species of plants?

DeDecker: No, no. There is a--

Holleuffer: There's a *Dedeckera*.

DeDecker: *Dedeckera* is the first new genus that's been discovered in California since, I think it was, 1949 when the dune grass was discovered. When it was named as a new genus, named for me, which was very exciting, I asked Tom Howell how long it had been since there had been a new genus discovered in California, and he told me that this was the first one since this dune grass [*Swallenia alexandrae*] was discovered by Annie Alexander in 1949.* He said, "Both discovered by women; how lib can you get?" [laughter]

Holleuffer: The other thing I wanted to mention in connection with Eureka Dunes, too, is that I guess it's the Board of Geographical Names that has also honored you with a canyon named after you.

DeDecker: Yes, it's the same canyon, *Dedeckera*'s type locality, now Dedeckera Canyon. It's in the Last Chance Mountains draining into Eureka Valley just southeast of the extreme south end of the dunes. I probably should go into this a little bit. During this period that

---

*Annie M. Alexander, founder of the Museums of Vertebrate Zoology and Paleontology at the University of California, Berkeley, who (with Louise Kellogg) carried on extensive zoological, paleontological, and botanical field work in western North America.--ed.

DeDecker: the Bureau of Land Management was planning roads and vehicle use, there was a lot of controversy over what should be opened for roads and what should be limited. So there was a kind of a jeep route from Saline Valley to Eureka Valley, and the ORV people wanted that left open because they appreciated the challenge of coming over that route. On the Eureka Valley side it dropped off over three small dry falls, and it was a very tricky thing to maneuver down these dry falls, and that was a challenge that they felt they should have.

The Sierra Club opposed that, and I wasn't too happy about it, but I did say that I would go along with the idea--it was a one-way corridor from Saline Valley to Eureka Valley--and I said, "As long as it's one way, I will go along with the idea and not oppose it because if they come from Saline Valley to Eureka Valley, the route is so long and so slow and difficult, that by the time they get to the sensitive part, on the lower side toward Eureka Valley, they would be anxious to get out, so they wouldn't be hesitating in the area where there were sensitive plants." So they agreed to that, and they put a sign up at the entrance on the Eureka Valley side that it was a one-way road, indicating that it was from Saline to Eureka Valley.

Well, it was not too long before they started building up ramps to overcome these challenges, to lessen the drop-offs. But in the meantime I was a little bit concerned about special plants there. We had come over the route a couple of times. I saw there was Buddleja utahensis, Buddleja which is the butterfly bush, and it was on the rare list. I had seen that at a turn in the canyon where there were high cliffs coming down, where the canyon turned and it made a kind of a little amphitheater there that would be a wonderful camping place if anyone wanted to camp there. I began to feel some concern over this Buddleja that I had seen growing there, knowing that if a group camped there, they would pull up any bush in sight to put in their campfire. I didn't know how abundant it was.

So I made a special trip up in there. What we would do would be drive to the mouth of the canyon and walk up about three-eighths of a mile to this open area. I went up to see how prevalent the Buddleja was, or how endangered it would be if it was very limited. As I walked up the canyon I saw a shrub at the base of these cliffs that looked like a buckwheat, and yet it looked different. It looked a little bit like Erigonum heermannii, the large form of it. I walked on up around the curve of the canyon, eastward, a little box canyon there, not too far up, and when I came back--

Oh, in the meantime I did find that this Buddleja was growing up in the cliffs and it was quite abundant, at least plentiful enough that I didn't have to worry about it being wiped out. So

DeDecker: as I came back I picked a sprig of this strange bush that looked like a buckwheat and took it home. It was in tight buds, little minute buds. I put it in a glass of water in my kitchen and waited for some of these buds to open up, but only one opend. It did look like a buckwheat flower, but it didn't have any involucres like a buckwheat. That's one thing that determines a buckwheat, an Eriogonum in the key. So I couldn't figure out what it was. Only the one little flower had opened, so I thought, "Well, I'll go back in about a month, and I should find it blooming and maybe going to seed and then have a better idea of what it is."

So we did, Paul and I. We went back on the Fourth of July, 1975, and gathered some. It was just golden, all over these dark cliffs, these golden bunches of this shrub. It was very dramatic, really, these high dark cliffs with these golden bushes all over. So I picked some and took it home. I spent a couple of days on it, trying to figure it out, but I just couldn't find anything that looked like that that didn't have involucres.

So I sent some to Tom Howell at the California Academy of Sciences and told him I had something to share with him, that this was either a new species of something from outside the area that I didn't recognize, and I couldn't find any description of it. So he worked on it a couple of days, and then he called back and said, "Well, congratulations, I think you have a new genus." Well, that was pretty exciting!

We contacted Jim Reveal, [James Reveal, Professor of Botany, University of Maryland], and he was on his way to California from Maryland. He's the buckwheat authority. So he came right out, wanted to go up the next day, which I couldn't do; but the day after we went out and hiked up the canyon, and he was very excited about it. It was quite a sight to see all this stuff growing there, knowing it was something new.

He said, "Well, it's very definitely a new genus. I've talked to Tom about it, and we wonder if you want to describe it because if you do we'll help you with the Latin description," and so on. And I said, "Well, I just don't know enough about the buckwheats outside this area to describe any new genus; that's just beyond me." He said, "In that case, we agreed that we would describe it and name it for you!" So I said, "Well, that's nice, because Paul's the last DeDecker in the line, and that would be nice to perpetuate the name." He laughed and he said, "They'll be discussing your name long after you're gone." [laughter]

Indian Artifacts in the Same Canyon

DeDecker: An exciting sidelight of this was when Paul and I were climbing the cliffs from this bend in the canyon, and Jim Reveal went around the point and was going to climb the cliffs from that point on up to the top. We were going to meet up there; we were going to just see what the habitat looked like at the cliffs. So as we were going up the cliffs, investigating as we went, there was a little shelter about the size of a fireplace opening, just a little rounded cavity in the rocks--this is dolomite, the cliffs were dolomite--and sitting upright in this little shelter was a basket, an Indian basket. It was a conical basket. The top had been chewed off by rodents, but otherwise it was in perfectly good condition.

The basket was standing in a little silt, but it wasn't rotted or anything. As I say, the top had been chewed off probably by rodents. What was very exciting to me was that in the silt that was sticking to the interior of the basket were Dicoria seeds, and in my campaign to save the Eureka Dunes I kept insisting that the Dicoria plants, which were being destroyed by dune buggy activity--that was one of the plants that grows high on the dunes--I insisted that even though that was not a rare plant, it was very valuable in the dunes' ecosystem because the seeds in that plant mature in the late fall or early winter, which is the off-season for nearly all the other seeds. So the little creatures who live on dunes would have that seed source. And seeing this in the basket, it was obviously left as a food cache, so the Indians must have used the Dicoria seeds, too.

Holleuffer: Can you give me a common name for Dicoria? What would I know it as?

DeDecker: I don't think there is a common name other than Clarke's Dicoria. It's a plant in the sunflower family [Dicoria canescens ssp. clarkae]* but it doesn't look like a sunflower. It's quite a large annual, up to four feet high there, and these seeds almost look like little flat sow bugs.

So I took the basket up to the top. I had a very large plastic bag, and I put the basket in this plastic bag to protect it, and we went on up to the top of the cliff and met Jim Reveal.

---

*"Dicoria canescens T.&G., an Aboriginal Food Plant in the Arid West," by Philip J. Wilke, Mary DeDecker, and Lawrence E. Dawson. Journal of California and Great Basin Anthropology, Vol. 1, No. 1, Summer 1979.

DeDecker: I greeted him with the news that it took a little bit of searching but I finally found a container worthy of our new genus! [laughter] So I gave it to--what is it, the--

Holleuffer: The Lowie Museum, at Berkeley?

DeDecker: Yes. I didn't have enough faith in our local museum to leave it here, so I gave it to Lowie Museum of Anthropology at UC Berkeley.

Holleuffer: Well, I'll have to go look for that.

DeDecker: They were very pleased to get it. It was a little bit different, I guess. I think they thought it was a Shoshone basket. So it's in a good, safe place.

Dedeckera Canyon Becomes an Official Name

Holleuffer: And is that area that you described, where the cliffs are, is that what will be known as Dedeckera Canyon?

DeDecker: Oh, yes. Just recently, last year, Susan Cochrane of the Department of Fish and Game felt that that canyon should be named, the type locality of Dedeckera, so she succeeded in having it officially named Dedeckera Canyon. Botanists already called it that. It's about two-and-a-quarter miles long, and the drainage comes down through this dolomite area into Eureka Valley, behind the dunes. It's a little bit east, mostly south of the dunes and a little east. It's officially described, of course.

So I was doubly pleased. I was, of course, very happy to have it named after my namesake, and I think it's a wonderful idea to have place names for plants, because plants don't get enough recognition.

VII OTHER CONSERVATION AND BOTANICAL ACTIVITIES

Death Valley National Monument and the Forty-Niners Organization

Holleuffer: I wanted to ask you--I know you work with government agencies. You've described some of your work with the BLM, and I know you did some consulting work for the Forest Service also. Did you also work for the Park Service?

DeDecker: Not officially for the Park Service. I've been very close to Death Valley National Monument through the Death Valley Forty-Niners organization, which is supposed to be a supportive group. It began in 1949 when they had a centennial celebration there, and the group who put that on about two years later, about '51 I guess, decided to maintain an organization, to incorporate, and put on some kind of a festival there, or celebration, every year. And this has gone on, and they have had a board of directors to accomplish this. Of course, they had to raise money and put on their programs. It's always been a three-day affair with breakfast, with speakers on various subjects, and campfire programs. In the beginning it was a real high-level thing. People would go to these campfires and breakfasts and be starry-eyed over the history and all the cultural and historical things that came out of these programs.

Then two things happened that I feel have sort of deteriorated the programs. One is that it became sort of a socially prestigious thing to be a director of the Forty-Niners. So instead of focusing on bringing in people who were really tuned into Death Valley and were really interested in supporting Death Valley National Monument, they began to bring in their cocktail-party buddies who maybe had never been in Death Valley or had only been to the resorts, and a few of us are still fighting that trend.

And then another thing happened too. Retired groups belong to these recreational vehicle groups, like the Good Sam Club and that sort of thing, and they come and descend on Death Valley for

DeDecker: the encampment, just great numbers of them, and their attitude in general seems to be, "Well, I'm here. What are you going to do to amuse me?" And that has sort of taken precedence over the higher-caliber programs that they had in the beginning. So I've sort ot stood alone in insisting that we're getting away from our focus.

Anyhow, my husband has been a director for a long time, and he was a president at one time, and finally I was nominated to the advisory committee and eventually became a director, and now I'm a second vice-president, so I will have a little more effect. In the meantime, in recent years, I've been chairman of the park liaison committee, and I've been very active in working with the Park Service people in trying to uphold the values of Death Valley National Monument.

Holleuffer: I was wondering, in comparing these different government agencies, whether you feel that any one or all of them are truly concerned with preservation and conservation, or are some really oriented toward recreation and development?

DeDecker: That's a real good question. The Forest Service has probably had the best management, and from what I hear from others about the Forest Service in other regions, I think probably the office in this region has been more slanted toward environmental values than most of the others. Of course, we don't have the forest to dominate the picture here. We do have some lumbering and forest activity, but it doesn't dominate the picture. Here it's more recreational, and by that I mean passive recreation or hiking or outdoor camping and that sort of thing, and they've done reasonably well in controlling ORV activity. So I've felt pretty good about the Forest Service here.

The BLM and the California Desert Plan

DeDecker: BLM has been very political, and they've done some things that I've considered very bad, and I've been very critical, such as the Eureka Dunes matter, and yet I still have a good relationship with the BLM people. Most of the problems come from the political figures in the upper bracket, but the people working for BLM, there have been some real fine people. Unfortunately, the political situation has driven a lot of good people out, because employees have left in disgust. But there are still some good ones left that are active in the program. The desert study was quite disillusioning.

Holleuffer: You were an advisor on plants for the desert study, is that right?

DeDecker: No. When the California Desert Study Program began [1970], there was a lot of money and it was well organized; eventually a Desert Committee of fifteen members was selected. I was considered for it, and I heard two stories why I wasn't put on the committee. One was that a professional botanist who had a good in with Alan Cranston in Washington was put on the committee, and after all he was a professional, and I didn't resent it because I felt he was a good appointee. He was well qualified. But another story I heard was that they wanted me to help with the plant inventory, and so they didn't want me on the committee, as a conflict.

##

Holleuffer: You said you were selected to do the plant inventory?

DeDecker: Well, the desert was divided into seven regions for the plant inventory, and I think also for the study of animal life and maybe other things, soils and so on. The Colorado Desert was divided into three parts, and the Mojave into four parts. There were the east, west, and central Mojave, and then the triangular piece to the north, which is basically what's in Inyo County and dips a little bit into Mono County, was called the northern Mojave.

They asked for applications for these contracts, and no one knew the northern Mojave enough to even apply for the contract or bid for it. So they gave me a purchase order to do the job. When the whole thing was finished it proved to be a much larger project I think than anyone expected it to be. In fact the number of taxa that I found in the northern Mojave was almost equal to what they expected to find in the whole California desert. So they greatly underestimated it.

Holleuffer: How many was that?

DeDecker: Oh, over 1,200.

Holleuffer: And that's separate taxa?

DeDecker: Yes, separate taxa. So that's a lot of plants.

Anyhow, it was a bigger job than anyone expected, and I was running out of time toward the end. I did get a day of helicopter time to hit some of the high places, which helped a lot. It was a tremendous job.

Holleuffer: How long a time did you have to do it?

DeDecker: I don't remember. It seems to me it was two years. I think I ran over the time that they designated. Frank Vasek [Professor of Botany, University of California, Riverside] was one person involved

DeDecker: I don't remember which section he had, but I was told later that Frank and I were the only ones that really completed the job, and others finally gave up and never did actually complete it, but they were paid for it. I didn't know this at the time, but I know that there was some resentment on Frank Vasek's part that we did the work and the others didn't finish it, and yet they weren't penalized in any way. And most of them were teams, and I was doing it on my own and I think he was. But regardless, that was just part of the effort.

An awful lot of money was spent. There were lots of pressures. I went to most of the meetings, which they had several times a year, meetings of this Desert Committee, and the public was always invited to attend. Most of the meetings specialized on some phase of work, such as mining or plants or grazing or something like that. I was highly impressed with that fifteen-person committee. BLM really did a fine job of picking a good cross-cut of well-informed people. I think they were pretty much dedicated to doing the best they could. It was a very complex job that they had.

But then the politics got into it, and it became apparent that it was becoming more and more political. And they had all this data, a tremendous amount of data, but they were not organized in a way to really organize it and make the best use of it, and that troubled those of us who had contributed data.

Holleuffer: This fifteen-member committee was there to gather data but not to make decisions about it, is that it?

DeDecker: No, they were not to gather data. They were just to, oh, formulate policies and decide where the emphasis should be. It was an advisory type of committee. They were not there to gather data or anything like that. This was all done by contract or by people hired by BLM. They had quite a staff of people, including some very fine people, and some of them were the ones that quit in disgust when they found that their efforts were just being bypassed or ignored, and so quite a few of them left.

Holleuffer: So was your work, then, taken to one of the people in--

DeDecker: Mine was all turned into the [BLM] office in Riverside. That's the office that headed the whole desert plan. It was an office just for handling the desert plan.

Flora of Northern Mojave Desert, California

DeDecker: I finished the job, and the information was on computer printouts, and people kept asking me, "When is this going to be published and when are we going to get to see what you found there?" It's the most complex part of the California desert; it has more high mountain ranges and deep valleys than do the other units. There's the Panamint Valley, Deep Springs, Death Valley, and Saline Valley, clear to the Nevada state line. So it was a very interesting part.

The only part of it that's really had much coverage is actually Death Valley itself, and by that I mean just the valley; they still haven't covered the mountains to any great extent. They're working on that now and doing some real good work on the mountain ranges, but at that time they had hardly started. So essentially the northern Mojave covered the most complex part and the least known part and I consider the most interesting part of the California desert.

That's what spurred me on to do this flora of the northern Mojave [Flora of the Northern Mojave Desert, California, California Native Plant Society, Special Publication #7, Berkeley, 1984]. As time went on I realized that BLM was not going to publish it or make it available to the public, and I felt that it should be. For one thing, I would want the public to know how valuable it is so they'll be interested in protecting it. I've been working on the Owens Valley flora for a long time and I want to get it finished, but I took time out to work on this northern Mojave. I didn't want to go through the process of getting it published and all that, I wasn't interested in the money it might bring in, so I asked the California Native Plant Society if they would like to publish it, saying I would prepare it for publication. They seemed very pleased and eager to do it.

So I started in. I originally intended to make just a plant list, with synonyms, to bring the names up to date. Then I realized it would be so much more valuable if I gave an idea of what part of the region these plants occurred. So I decided to add that and also the elevational ranges, extremes high and low, elevations. Then I talked to my son-in-law about it, and he said, "Well, you should put flower color because that will mean a lot to the lay person." So I did that, except in cases where there were no conspicuous flowers, such as the saltbushes and grasses.

And it took a lot of work, of course. I had to figure out how to organize it. Harlan Kessel [University of California Press, Berkeley] was very helpful in giving me suggestions. Of course, he's in the book business. Then he sent it out, when I had the manuscript all completed. I really had trouble toward the end. My typewriter was going bad.

DeDecker: When the manuscript was finished, Harlan Kessel then sent two copies out for criticism or review. One he sent to Jim Smith at Arcata [Dr. James P. Smith, Professor of Botany, Humboldt State University], who looked it over and sent it back with some helpful suggestions for heading the plant families or something; I don't remember what they were, but he gave several very helpful suggestions. And then Mr. Kessel sent one copy to Margaret Williams, who heads the Northern Nevada Native Plant Society, more or less a botanical neighbor, and she's very active. In fact she sort of dominates the Northern Nevada Society.

Time went on. We were hoping to get the thing available for Christmas, but we finally realized we never would make it. Time went on. She had it at least a couple of months. I was a little dismayed that she held onto it so long, and so was Mr. Kessel. Finally he called me up and he said, "Well, we finally got the manuscript back from Margaret Williams. I don't want you to take it too seriously. This is <u>your</u> book and your project, and I want you to accept only what you feel that you <u>want</u> to accept, and don't be upset over the rest of it."

Holleuffer: Had she really raked you over the coals?

DeDecker: Oh, she had taken a heavy pencil and went through the whole thing, slashing across the pages. She didn't agree with my punctuation, the way I used commas and semicolons.

Holleuffer: Oh dear!

DeDecker: And perhaps her idea was better, but all she had to do was say, "In the case of this I would suggest using semicolons in certain situations instead of commas." But no, she went through every page and just slashed big, long, hard, heavy pencil lines, and it made it look like a disaster! [laughing] She managed to find a few misspelled botanical words. Out of over 1,200 you're bound to miss a few, but there were not many, and she checked a few that were correct that she marked as misspelled. It was really unbelievable.

Holleuffer: Well, it did eventually get out for <u>this</u> Christmas, anyway. I know because I saw it.

DeDecker: Yes. Well, what really upset me about her--that was bad enough, but then she wrote a letter back when she returned the manuscript, and said, "I think if all the errors are corrected this might be suitable for publication." Nothing constructive, no comment on the value of the book. Anyhow, if he hadn't warned me, I think I would have just collapsed!

DeDecker: Anyhow, I've had some excellent comments on it, excellent reviews. Even Peter Raven, back in the Missouri Botanical Garden [St. Louis, Director]--he was sent a copy and he wrote to tell me what a fine contribution it was and how pleased he was that it had been published. You know, people like that that really are authorities.

I had been going to ask Margaret Williams to write the foreword, but I changed my mind! [laughter] So I asked Frank Vasek to do it, and he said, "Oh, I'm honored," and I was very pleased that he did. I felt that it was just right. He has a feeling for the desert, and that's what I wanted.

White Mountain Natural History

Holleuffer: Now, at present, you're working on a book on the flora of the White Mountains.

DeDecker: Yes, the White Mountain Research Station is now being directed by Dr. Clarence Hall [Junior Professor of Earth and Space Sciences, UCLA]. He's a geologist. He has gone into it with the idea of broadening the base of scientific interest, broadening the base of opportunities for students, undergraduates, grad students, and scientists in general. The station for many years was concerned with physiological responses of organisms to high altitudes. Then, for a time [1977-79], there was the hope of having it be a center for visiting astronomers. Dr. Hall believes that there's so much interest there in the biological fields and in geology and all the natural sciences that he wants to make it accessible for learning all there is to be learned, either through the station's program or in cooperative work with others.

So he's encouraged evening programs at the White Mountain Research Station, out of Bishop, and he's opened a camp up there, a 10,000-foot camp at Crooked Creek, a place where students can stay and do their projects, and there's a kitchen available, and it's all very reasonable. There is also a high elevation camp, Bancroft, at 12,000 feet. The headquarters on East Line Street out from Bishop also has dormitories and a dining room for those involved in research projects.

And then Dr. Hall came up with the idea of having a White Mountain natural history, and he asked if I would participate. I'm so keenly interested in this range that I thought, "Gee, that would be nice to do," so I said I would. The time came, and I started in on it. I was to do the wildflower part. Someone

DeDecker: else was going to do the trees. I started in, and then they decided to make it cover the Inyo Mountains too. It's all one range, anyhow. That made sense to me, and I'm very fond of the Inyo Mountains, so I was pleased that they were included, but it meant a lot more work.

The next thing, they told me that they had decided to make plants a major part of the book. [laughter] And I thought I would just select representative plants and cover those, but they want a lot more than that. Well, of course, he's not a botanist, and I'm sure he didn't realize what he was asking for. Anyhow, that's what I'm doing.

Holleuffer: Will it be illustrated?

DeDecker: Yes. They want a slide for every species, but they can't possibly get that because in the first place they wouldn't have enough room in the book for all that. I don't think they realize how many plants they're talking about.

Holleuffer: How many <u>are</u> you talking about?

DeDecker: Well, I can't give you an exact number, but there are a lot of them, perhaps 350. Many of them are inconspicuous little things that you just don't have photographs of. But I've assured them that even though we can't have photographs for all of them that my descriptions will enable anyone to identify the plant. I'm not going into technical descriptions, but I am trying to identify the plant well enough that it can be recognized by a lay person. So I feel pretty good about these descriptions, and I'm almost through with my project. I'll need another month of work to finish that.

<u>Women among Botanists, Ranchers, and Miners</u>

Holleuffer: Have you found, in your work, that it's been a problem to be either a woman or to be a non-professional in terms of not having the education and the degrees? Is there jealousy on the part of botanists?

DeDecker: I haven't found that true with botanists or the professional people. There was only one case that I ever ran into anything that seemed to--

Holleuffer: People that you do consulting work for don't hesitate to ask a woman?

DeDecker: Oh, no. They're familiar with my reputation. I mean, they want me on the team because they feel that if my name is on the proposal

DeDecker: that it will help them get the contract. And that's been true, because they know that I know this area. And professional botanists have been supportive, they've been helpful, they've been appreciative of any input I've had anywhere, and I just feel botanists are super people. Jealousy comes from people who want to be authorities and feel jealous, and there is some of that. I overlook a lot of it, and then I get kind of fed up sometimes.

Holleuffer: You mentioned Frank Vasek. Is he the one who's discovered these very ancient creosote bushes [Larrea tridentata]?

DeDecker: Yes.

Holleuffer: Now, on the television program that I saw about two weeks ago, on the national news, NBC, they had one of the reporters out on the desert looking at this creosote bush, which they claimed was 11,700 years old, when Pine Alpha [Bristlecone pine] is supposedly the oldest living thing on earth, and that's 4,300 years old?

DeDecker: Yes.

Holleuffer: How can they tell how old the creosote bush is?

DeDecker: Well, this is kind of a complicated thing, and I can't explain it very well, but what it is is cloning. It's a little bit like the bristlecone. A tree will grow and live its life, and then others will come up around it. They speak of it as piggyback. The trees come around the original tree, and the original tree will die. These are clones from the original tree, and then there will be other rings, and that happens in bristlecone. Well, in creosote bush it's the same thing, only it's not so obvious because there's not much trace left of the creosote that died. But when you see these big rings on the desert, like from the air--

Holleuffer: If you had an aerial view, you'd have this huge, huge ring.

DeDecker: Yes. Then you begin to wonder, you know. He's figured out that these rings are just the outer rings of cloning that has been going on for thousands of years.

Holleuffer: But he isn't counting rings on a bush, 11,700?

DeDecker: No, but he has counted--

Holleuffer: How can he tell?

DeDecker: Well, I don't know, this gets more technical than I can explain, but that's the basis of his research. He has some way of comparison or checking, either by checking with other plants, like they

DeDecker: do in the bristlecone, to get rings or something that they can check and use as a kind of a measuring stick or a basis for his computation. But it's a fascinating thing.

Holleuffer: They were careful not to reveal the site, which I think is a good idea.

DeDecker: Yes. It was a brilliant piece of work.

You asked if I ever felt because I was a woman or so on-- There's kind of an interesting project going up in Bodie. It's under the Bishop area office.

Holleuffer: The Bishop area office of--

DeDecker: Of BLM, that's BLM land. The Bodie Hills have been overgrazed and abused, of course, like so much of BLM land, so BLM knows that they have to reduce the AMUs, the animal monthly units, on a lot of the grazing land. Of course, they're meeting with opposition. Then, the environmentalists are demanding more and more that the land be given proper management. So they've come up with what they call the Coordinated Research Management Plan. I think I've mentioned that in there. This calls for people from different viewpoints, different interests, different expertise to come in and all work together to try to first recognize the problems and then decide what to do about them. Like in the desert meetings, they would have meetings and discuss problems and so on, but they would have such polarized input that it was just impossible almost to bring them together. Well, when they go up there and go out in the ground and discuss these on the very site, you know, man-to-man and so on, why, it makes an unbelievable difference in the results.

We were notified down here, the Bristlecone Chapter, and I was notified personally, and the Sierra Club was notified, and all the different agencies and so on, and we went up to Bridgeport, and here was a big public meeting hall full of people, including a lot of the cattle men and ranchers and mining people, anyone that had any interest in Bodie Hills, and I was the only woman in this whole hall!

Holleuffer: Oh, my goodness!

DeDecker: No, not the only woman. I was the only one from this area. There was a woman from up in northern California who was there to explain the process, but I was the only woman from the area. Anyhow, I was put on the technical review team, the one that goes out to look at the sites and so on. Again, I was the only woman out in the field with these ranchers and cowboys. We had a meeting then, just our review team and the people involved in that, and I was <u>still</u> the only woman, and then it came out that I was an environmentalist, and, boy, did they look on <u>me</u> with suspicion! [laughing]

DeDecker: It was really funny. But when we got out in the field, why, then I could just see their attitude changing. They saw that I was tuned into the land and that I knew what they were talking about and that I was interested, that I knew what I was doing, and we became real buddy-buddy, but at first it was very funny.

Politics in the BLM

DeDecker: You asked about the different agencies, and I got off on BLM and how political they are. When the Reagan administration went in, it just made it immediately worse, because then the users felt that they had the upper hand and they took advantage of it, and BLM management reacted accordingly. So there has been a pronounced decrease in protection. However, they are making an effort to at least protect certain portions, and I think their big play now to protect the Eureka Dunes is to have an image that they can show people what good guys they are by protecting this great place. They're using Eureka Dunes as kind of a showpiece, which is all right! I don't care why! Except that they feel that by saving that, they can sacrifice other areas, which isn't so good.

And their credibility has always been a little bit bad, as far as I was concerned. For instance, this jeep corridor from Saline Valley to Eureka Valley--as I say, I went along with that idea because it was sort of a compromise and I didn't think it would do too much harm because it was one way, from Saline to Eureka. Well, then it got to the point that they were going both ways, because they built up these little dry falls, built up rocky ramps so they could go the other way.

When I protested about it recently, when they were putting maps out on the roads in these areas and I insisted that it be held to a one-way road, nobody could remember it. No one could remember that that was an agreement.

Holleuffer: Didn't they have minutes from their meetings?

DeDecker: Most of it was that there had been a lot of transfers, you know, but there were still some of them that were here then, and they just conveniently forgot about it. So it was just my word against everybody.

Holleuffer: And what was the final outcome? It's two-way?

DeDecker: It's two-way, yes. So those things, you know, make you feel you can't quite trust them. And that Dedeckera Canyon that it goes through is just a treasure trove of relatively rare plants, so that's why I felt so strongly about it. [brief deletion]

##

Burro Problem in the Desert

Holleuffer: You were going to speak about the Park Service, and in particular Death Valley National Munument, I guess, and the problem with burros.

DeDecker: Burros are a tremendous problem, and the political climate has discouraged the Park Service from being too--well, they've been ten years trying to get this burro control program going, just because they were afraid of lawsuits or the animal protection groups and so on. Of course I've been out in the field and seen how they devastate the natural environment. In the springs they just--well, it's disgusting what they do to springs.

One good example is when Bruce Pavlik [Ph.D. from University of California, Davis, Thesis on Eureka Dunes. Now Professor of Botany, Mills College, Oakland, California] and I were coming off from Tin Mountain, which we had reached by helicopter, we had a limited amount of water. Of course, water's awfully heavy to carry, and we were rationing it to make it last through the third day. We came to a deep ravine, and we looked down in the bottom, and there was a damp area that would indicate water, so we were very pleased to see that. We thought, well, we'd go down and wash and freshen up a little bit and have a little extra water to drink. So we descended into it, and found just a stretch of damp mud, just urinated mud is what it actually was, from the burros trampling and just ruining it, trampling every bit of vegetation that would be the normal riparian borders of a spring, and it was all gone, and just this muddy stretch along the bottom of this ravine. So we had to climb back up again without even having a drink or even washing our hands.

And in a situation like that it's impossible for bighorn sheep to drink or even for little animals, little rodents, to drink in most cases, and, of course, all their cover around the spring is wiped out. So it does an awful lot of long-range habitat devastation.

And we went on down the mountain. At the upper elevations of Tin Mountain, it was just beautiful and natural, no evidence of burros. Then we gradually got down to the point that we saw burro trails and the effect of burros' activity. As we went on down, we came to a place called Burro Spring. It was in a sort of a bowl, an open bowl, and there was just a little round area of moist mud in the middle, and all around it for, oh, maybe fifty feet around it was just a dust bowl.

So that's an example of what they do to a spring. They even ruin it for themselves. I don't think even a burro could drink. The only way a burro can drink from a place like that is wait til

DeDecker: one of their footprints fills up and drink from it, because there's no pool of water. And the trails of course were more and more concentrated until much of the vegetation is just killed by trampling and compacting the ground all around the spring within a big radius. So it's pretty disgusting to see that sort of thing.

But the animal protection people never have such an experience. They don't realize how serious the damage is, and they get all emotional over those cute animals with the big ears and big brown eyes. I mean, I like animals, I used to ride a burro to school when I was a little girl, but the burros were kept in corrals and they weren't out ruining the country. Burros were bred to be hardy and to thrive under any conditions and to eat almost anything. The animals that have to compete with them are native things that are dependent on specialized habitats, and when that's wiped out they have no place to go. They're decimated because their habitats are ruined. That's something else that these people don't realize.

The Death Valley Forty-Niners, as I said, is supposed to be an organization to support Death Valley National Monument. I was chairman of the park liaison committee and at one of our meetings--this was several years ago, four or five years ago at least--the chief ranger said that the biggest problem at the moment is the burro problem. So I got right on it. We meet every second month. I asked the naturalist in Death Valley, Pete Sanchez, to draw up one page of reasons for burro control, and he did. He did a good job, and it was all very simple, well-stated reasons. I asked him to limit it to one page, and we would send it out with our minutes and the announcement of the next meeting, which I did.

So we brought it up, then, during our regular meeting of the whole body of directors. People were pretty much inclined to follow our recommendation to support the Park Service in the burro removal program, but at the last minute someone in the back of the room got up and said, "Well, I think this is too important an issue to act on it hurriedly. I move that we table this until our next meeting," which would be two months later.

I was really disgusted because they'll vote on things without any information at all, just readily vote on very foolish things, and here was something with plenty of information, but they were very suspicious. So I thought, "Well, next time I'm going to be prepared." So, do you know Tillie Barling down at the Weapons Center? [Now Naval Ordinance Test Site (NOTS), China Lake]

Holleuffer: No.

DeDecker: She's quite a strong woman. She was head of the resources program, or whatever you might call it, on the Weapons Center, for a long time.

Holleuffer: And they have a burro problem, too!

DeDecker: Oh yes. So she told me, "If you need any help on this, why let me know." She had told me that. So I thought, "Well, it's time to call on Tillie for help." Our next meeting was to be in Bishop, so I asked Tillie if she would come and give a short presentation, about fifteen minutes, to convince them that we had to do something about the burros. So she said she'd be glad to.

So when it came up at the meeting in Bishop--I knew something had been going on the night before. Most of the directors come up the night before and stay overnight, but we don't because we live so close. So we weren't up there socializing with them, but I knew something had gone on, but I didn't know what. Well, some of the people got together and were going to oppose this.

Anyhow, I brought it up, and I introduced Tillie. Oh, she came with her commanding officer, all in uniform, looking very impressive! [laughing] And she put this on in a very matter-of-fact way, slides that really showed the devastation; they were very effective. It was just a presentation, she didn't give any recommendation or anything. She put this on, and that was it.

Holleuffer: Now, in the Weapons Center didn't they shoot the burros for a while?

DeDecker: Yes, they did, and they had quite a reaction, but they had a good reason because burros were getting on the runways and--

Holleuffer: Yes, they were a danger actually to the aircraft.

DeDecker: Right. And they were doing terrible things to the petroglyph canyons up there.

So I told the group afterwards, "Now, you have had far more information than you ever get on most issues, and you've certainly had enough to vote intelligently. We could go on all day, and discuss this and give you more and more reasons for doing this, but I don't think it's necessary. You're able to make an intelligent vote now and decide whether you want to support the Park Service in this control program or whether you want to refuse to do it." About that time Horace Albright got up, and he said, "Well, when I was head of the Park Service and we were having the problem the first time in Grand Canyon"--and he gave the year--"I said, 'Shoot 'em!' and that's just what we did." [laughter]

Holleuffer: Good for Horace!

DeDecker: So then it came to a vote, and the forty-nine directors, plus the officers, and it was--

Holleuffer: How many directors?

DeDecker: Forty-nine. They voted to do that at one time.

So they overwhelmingly voted for it. There were three I think who voted against it and two abstained. It was quite a victory, really. So that closed the meeting, and one of my friends, long-time friends that I felt was my friend anyhow, he came up and gave me a big kiss and said, "Congratulations!" Well, I had seen he voted against it. I said, "Why in the hell didn't you support me?" He said, "Well, I just didn't think the timing was right." He's very much a wheeler-dealer. So I thought that was kind of amusing. And the other fellow that opposed it invited us to a cocktail party at his house that evening! So they wanted to make peace.

Then the Park Service still had a way to go before they got clearance from the headquarters in Washington to go ahead, but now they're very actively rounding them up and getting rid of them.

Holleuffer: Yes, they aren't shooting them, though.

DeDecker: They aren't shooting them yet, but they will if they can't--

Holleuffer: It's an adoption program, isn't it?

DeDecker: Yes, it's outrageously expensive. It's ridiculous.

Holleuffer: Yes, per animal it's very expensive.

DeDecker: But that's sort of typical of the way these things go.

The Most Important Achievement

Holleuffer: Well, Mary, you've been given many awards and many citations for your work in botany, and I was wondering, if you were to be remembered for one thing, either a body of research, a plant, a natural area, whatever, what would you hope that thing would be that would be associated with the name Mary DeDecker?

DeDecker: What I think would mean more to me than anything else is to feel that I've made some inroad in protecting Owens Valley in the water situation, but that's pretty hopeless I think. I think I have

DeDecker: accomplished a lot, but certainly not what should be done to protect Owens Valley, because the power of Los Angeles [Department of Water and Power] and the stupidity of our local officials is a very bad combination.

Holleuffer: Do you feel like a voice crying in the wilderness a lot of the time?

DeDecker: Yes. And I think what is discouraging is that people come to me and want me to help, you know, defend the cause or to make a difference, and I'll drop things that I think are important, projects I'm working on, to put time into this. Then, the DWP is very clever at dividing people or buying people off, and before I know it the people who've asked me to help them have fallen by the wayside. They've been bought off or they're tired or lose interest. And you get a little tired of being left out on a limb. When I become involved I intend to see it through.

Holleuffer: You're, I guess, seventy-five years old now?

DeDecker: Let's see, yes.

Holleuffer: And I hope that you'Il have another seventy-five in order to fight the Department of Water and Power! [laughter]

DeDecker: Well, the engineer up in Bishop told one of my friends--a young man who lives in Independence--he said, "Oh yes, we'll just stall along and these people will die off and we'll have clear sailing." This young man told me this. I said, "Well, they're just waiting for me to die!" And he says, "Yes, but I'm going to be around!" [laughing] But there are not enough people to follow up on this thing.

Another thing that means a lot to me is protection of the desert and the desert ranges. I have a very keen feeling for the value of the desert and the valleys and the basins and the desert mountains, and I think I've at least created some positive reaction there. You know, there are always other people helping on these things. It's not just me. I happen to be in a position where I can have a little bit of clout.

##

Founding of the Bristlecone Chapter of the California Native Plant Society

[After the interview was completed, Mary DeDecker wished to add a few words about the founding of the Native Plant Society's Bristlecone Chapter.]

In past years, whenever such issues as water matters, ORV control, or zoning came up, there were all too few who understood the importance of native plants. Of course there were biologists in the Forest Service or BLM, but they were usually transferred elsewhere about the time that they became acquainted with the region--or they were not free to speak as individuals. I had realized for a long time that we needed a broader base of plant people. Although I was a member of CNPS, we had no chapter here. Finally though, the time came when I felt we could organize a chapter and keep it going. Our first meeting was March 31, 1982, in Independence. We decided that we should name it the Bristlecone Chapter and that it should represent Inyo and Mono counties. Vince Yoder, who had been active in the Marin Chapter, CNPS, was elected our first president. Now people in eastern Kern County are joining our chapter because we share the same kind of country, and a scattered number elsewhere join because they find this a fascinating part of California. We now have 140 members.

Besides the good fellowship this has meant, we now have an ever-expanding base of people who know a lot about the native plants--some becoming experts. It is a healthy new force to be reckoned with on the local scene. I think we all feel pretty good about it--we've seen that it does make a difference, and our group is respected. Our county officials are finding that it isn't just that DeDecker person who notices and makes a fuss. Some are even seeking our support.

Conclusion: The DeDeckers' Greatest Achievement

Since Carol and I ended our interview rather abruptly, here is a final paragraph that I would like to add:

Paul and I feel that our greatest accomplishment is in our offspring. Our two daughters and their families are the kind who help make this world a better place. All seven of our grandchildren are tuned in to environmental values--and most of them are majoring in the natural sciences. Two will soon earn their Ph.D.'s. We are confident that they and their friends will carry on--and have fun doing it. [Mary DeDecker, November, 1985.]

Transcribers: Stella Dao, Joyce Minick
Final Typist: Elizabeth Eshleman

TAPE GUIDE -- Mary DeDecker

UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

REGIONAL ORAL HISTORY OFFICE
THE BANCROFT LIBRARY
(415) 642-7395

BERKELEY, CALIFORNIA 94720

APPENDIX A -- An Exchange of Letters with Mary DeDecker on the Department of Water and Power

21 February 1986

Mary DeDecker
P.O. Box 506
Independence, California 93526

Dear Mrs. DeDecker:

A final reading (and indexing) of your oral history brings up a few questions. First, we didn't get the married names of your daughters. Could you please send them along?

Second, we would like to follow up on an intriguing aspect of your battle with the Department of Water and Power. We notice that your husband was employed by Department of Water and Power in Owens Valley and wonder how your adversarial relationship with Department of Water and Power might have affected his employment. (They appeared to be so vindictive in other ways.) Some comments on this, including his dates of employment, would be valuable to include, we believe, unless you would rather not.

Thanks again for all your help.

Sincerely,

Ann Lage

AL:lj

Mary DeDecker
Botanist

140 W. PAVILION STREET
P.O. BOX 506
INDEPENDENCE, CA. 93526
(619) 878-2389

March 3, 1986

Ann Lage
Regional Oral History Office
The Bancroft Library
University of California
Berkeley, California 94720

Dear Miss Lage:

Your recent letter must have arrived just after we left town for nearly a week. I hope the delay in replying has not inconvenienced you.

As to our two daughters:

Joan is Mrs. William E. Busby. They live in Mill Valley, Marin County. Their children are William Huntoon, Lawrence Paul, Annette Carol, and Robert DeDecker.

Carol is Mrs. Delbert Wiens. They live in Salt Lake City. Their children are Paula Lynne, now Mrs. Don Mansfield, Wendy Caroline, and Alison Maria.

As for relationship with the Department of Water and Power:

Paul went to work for the Los Angeles DWP in November, 1930, and retired August 31, 1971. His employment with the DWP was continuous except for a very short period in 1933, during the depression. The relationship was harmonious throughout. Good working rules were established by 1940, and I'm sure the DWP valued Paul as a good employee. He was Truck and Equipment Dispatcher for the Los Angeles Aqueduct, Northern Division. That included supervising crews of men who did non-repair services on cars, trucks and construction equipment.

During Paul's working career there existed the best feeling that there ever has been between the Los Angeles DWP and the people of Owens Valley. The DWP was truly working on improving public relations here. It was not until the effect of the "second barrel" of the aqueduct became apparent that a new wave of bitterness developed. That was in the early 1970's, after Paul retired.

It has been true that anyone working for the DWP has not dared to oppose the DWP objectives. A major problem in our effort to arrive at a better water agreement was that no one working for the Los Angeles DWP or the County of Inyo dared to oppose that "Historic Agreement". That excluded those who were in the best position to recognize the hidden dangers in the agreement. The Los Angeles DWP engineers and attorneys had one objective in mind, to secure all the water that Los Angeles might need. Our Inyo County Supervisors were too overcome by flattery and the importance of their position to accept any doubts expressed by their own people. It was in spite of them that some of our analytical concerns

reached the Appellate Court and successfully tempered some of the dangerous provisions of the agreement.

Now, after a decade of arrogance and vindictive actions, the DWP is again trying to improve its image. Perhaps they have found that the ordinary people, whom they thought did not count, are capable of making a difference. The obnoxious head of this division was transferred back to Los Angeles. (This was shortly after Paul, in a conversation with the head Aqueduct Engineer in Los Angeles, told him they would do much better without that smart-ass engineer up here.) I know that the DWP officials consider me a chief obstacle to their success in putting things over in Inyo County. There is no way that they can get to me except through things that I care about in county government. And yet I suspect that the local DWP engineers respect me. We are able to communicate in a friendly way when we meet in public. I know though that they work for a ruthless entity, and they know that I will fight to the end for a fair deal in Owens Valley. I think that time is in our favor but the dangers are frightening.

Feel free to take what you consider appropriate from the above.

Sincerely,

Mary

Mary DeDecker

APPENDIX B -- Interview Questionnaire, January 1985

Mary DeDecker
P.O. Box 506
Independence, California

Year and place of birth: October 3, 1909. Texas Co., Oklahoma.

What kind of a community did you grow up in- rural, small town-?
Rural until I was 8 years old. Then in Los Angeles, the outskirts, for a year, before going to Zelzah in the San Fernando Valley.
Cities or areas where you have lived:
Lived in Zelzah, now Northridge, until I was married. Then in North Hollywood most of the time until we movedto Independence in 1935. We did spend a year in Spunky Canyon when Joan was a baby.

Past and present occupations- earliest to most recent and years engaged in each:

Years-18	Occupations
	Secretary to the school board(H.S.) and then to the District Supt. after the schools unified.
10	Title Officer for theTitle Insurance and Trust Company. Did the "long orders", all the mine orders, and those for the utility companies and highways. This was for Inyo-Mono.

After 1967 I have focused on plant work. Have never looked for other work but have been hired or given contracts for many consulting jobs. Largely to fulfill the requirements of CEQA.

Organizations in which you are active- offices held - conservation, environmental, service, professional groups:

All the local organizations in my time--PTA, Garden Club, Civic Club, League of Women Voters, botanical organizations, Inyo Associates, Death Valley '49ers. Have served a number of years as Park Liaison Chairman of the Death Valley '49ers, a supportive organization for Death Valley National Monument. Am now 2nd vice-president of that organization. Have also been active in the Eastern California Museum at various times, mostly a disillusioning experience. Have been president and/or secretary for most of the local organizations.

Have also been active in the Concerned Citizens and the Owens Valley Committee, both activist organizations to fight for the rights of Owens Valley in the water issues.

For some years I was active in the Democratic Party. Was on the Democratic Central Committee in Inyo County for a long time. Was appointed to the State Central Committee by Senator Charles Brown.

Have you been involved with native plant legislation, studies of wilderness areas, habitat conservation?

Yes, all of the above. I try to keep abreast of issues, especially those which affect this region. Was especially active in the planning process for the California Desert. My greatest battle was over the Eureka Dunes. I was on a BLM Committee in the planning process. outnumbered by use people. When it became a hopeless situation I told them I would conduct my activities outside that committee. It was then that I was able to recruit the support which eventually saved the dunes. In the beginning I hoped for some kind of a compromise. The outcome was that we gained it all--the entire dune system was closed to ORV activity. Of course the botanical community came through with flying colors. Also the Sierra Club.

When and where did you get started in botany?

Influences:
Father a business school graduate turned farmer.
Grandmother a woman Dr.

My father encouraged me to appreciate plants, and taught me to see the differences in leaves, etc. Healways provided me with a plot for a garden. Then in a high school biology class the teacher put me in charge of all the plant projects. That must have indicated a special interest, although I didn't realize it at the time.

Botanical work, especially in the eastern Sierra:

It started in trying to learn the plants. Everything was different here. Books I had used in the San Fernando Valley simply did not apply here. When I accompanied Paul on fishing trips, I spent the time studying the plants, writing notes to describe them and making sketches of details. Then Mark Kerr, a sensitive naturalist who lived in Independence at the time, gave me helpful suggestions. He introduced me to Jepson's flora, but it did not cover this part of California too well. I did invest in a copy though. ($11 was a lot of money then.) Then I had to learn the botanical terms to use it. Mark suggested that I send plants out for identification, namely to Dr. Philip Munz at the Santa Ana Botanic Garden and to John Thomas Howell at the Academy of Science. These two men gave me the helpful support that I needed. Their patience and encouragement made it possible for me to keep growing and learning. There was no end to the opportuniti in this relatively new region. The plants were too fascinating to ignore. My husband and two growing daughters enjoyed hiking and backpacking, so we shared wonderful trips which gave me access to many remote places.

After that there were two turning points. Our second daughter married a botanist. CEQA, calling for IER's, placed me in a key position. No one else knew the flora well.

Publications:

See resume.

APPENDIX C

Mary DeDecker--Articles and publications.

a) A major contributor to "Deepest Valley" edited by Genny Schumacher Smith. This is a popular guide book to Owens Valley, now out of print after several reprints. It is now being revised and updated.

b) Author of"Mines of the Eastern Sierra" which has been reprinted many times since it came out in 1964. It is a local history based on the most interesting of the old mining districts.

c) Author of "The Eichbaum Toll Road", the 10th Annual Keepsake of the Death Valley '49ers, 1970. It is a short history of the Toll Road over Towne Pass into Death Valley and the beginning of Stove Pipe Wells Resort.

d) Coauthor with Dr. Delbert Wiens of "Rare Natural Hybridization in Phoradendron (Viscaceae)." Madrono: Vol. 21, No. 6. April 1972.

e) Author of "Rediscription of Eriogonum Hoffmannii, a Death Valley Endemic." Madrono. Vol. 22, No. 7. 1974.

f) Contributed the botanical work on "Agriculture Among the Paiute of Owens Valley" by Harry W. Lawton, Philip J. Wilke, Mary DeDecker, and William M. Mason. The Jornal of California Anthropology. Vol. 3, No. 1. 1976.

g) Coauthor of "Dicoria canescens T. & G., an Aboriginal Food Plant in the Arid West" by Philip J. Wilke, Mary DeDecker, and Lawrence E. Dawson. Journal of California and Great Basin Anthropology. Vol. 1, No. 1. Summer 1979.

h) Author of "The Eureka Dunes." Fremontia. Vol. 3, No. 4. Jan. 1976.

i) Author of "Ephedra--as strange as it seems." Fremontia. Vol. 5, No. 4. Jan. 1977.

j) Author of "The Loss of Sidalcea covillei." Fremontia. Vol. 5, No. 4. Jan. 1978.

k) Author of "Can BLM Protect the Dunes?" Fremontia. Vol. 7, No. 2. July 1979.

l) Coauthor of "Owens Valley and Mono Lake. Dying of Thirst?" by David Gaines and Mary DeDecker. Fremontia. Vol. 10, No. 3. Oct. 1982

m) Author of "Flora of the Northern Mojave Desert, California" with foreword by Frank Vasek. Special PublicationNo. 7, California Native Plant Society. 164 pages. 1984.

OTHERS NEARING COMPLETION.

a) "Flora of Owens Valley and Its Mountains" which will be a complete flora with keys and descriptions. I have put this aside to meet more pressing deadlines.

b) "Natural History of the White-Inyo Range", a project of the White Mountain Research Station under the direction of Dr. Hall of UCLA. I have done the

Wildflower Section which is the major part of the book. It will go to press soon.

c) "Wild Flowers I have Known" (tentative title) being published by Chalfant Press. This book will contain 110 of the weekly columns I have written for the local Chalfant Press newspapers under the heading of "Inyo-Mono Garden". Many will have color photographs and the others will be in black and white. The book should be out soon. (My weekly columns continue, so there is the possibility of another edition.)

APPENDIX D

PLANT DISCOVERIES.

Have discovered several new plant species, a new variety, and a new genus as follows:

a) Astragalus lentiginosus var. piscinensis. Discovered at Fish Slough, 6/2/74, north of Bishop. It resembles the rare var. sesquimetralis of Sand Springs in the upper Death Valley drainage.

b) Astragalus ravenii Barnaby. I collected this 7/6/56 on Sawmill Pass, at 11,350 feet. It was not yet in fruit but I sent it to Dr. Munz who did not come up with any determination. I thought it was something different and planned to go up the following year to find mature plants. But before the month was over, Peter Raven collected them at the same site. When I visited Tom Howell that fall at the California Academy of Sciences, he showed me the new species. An interesting coincidence!

c) Dedeckera eurekensis Reveal & Howell. First collected 7/4/75 in the Last Chance Mountains about 3 miles southeast of the high portion of the Eureka Dunes.

d) Lomatium inyoense Math. & Const., now Lomatium foeniculaceum (Nutt.) Coult. & Rose ssp. inyoense (Math. & Const.) Theobald. I first collected this 7/5/53 on the crest of the Inyo Mountains. Although I sent it to Dr. Munz, he did not know what it was. Later he was up there with John Roos and collected that, among other things. Having forgotten about my collection they published it as a new species in El Aliso, April 1955.

e) Lupinus dedeckerae Munz & Dunn, now L. padre-crowleyi C.P. Smith. We thought this was a new species. I first collected it 7/19/57 on the north fork of Big Pine Creek, then found the same thing 7/21/68 on Coyote Creek at 9600 feet and thought it must be a new one. Munz and Dunn agreed. But a recent study revealed that it had been known before and had been named L. padre-crowleyi.

f) Trifolium dedeckerae Gillett. I first collected this one along the road to Horseshoe Meadows at 7500 feet, 5/30/68. It seemed to key out to T. productum but I did not feel satisfied with that. So I sent it to Dr. Munz with the note, "This keys out to Trifolium productum, but that does not seem quite right. What else could it be?" When John Gillett was studying clovers a few years later, I furnished him with more information on the habitat and location. He told me it had been collected previously in the White Mountains and had been called T. productum. It was a pleasant surprise when he named it for me, based on the fact that I questioned it.

Have made the first collections of the following in California, most of them previously known in Nevada:

a) Agave utahensis Engelm. var. eborispina (Hester) Breit. Discovered in the Nopah Range 5/16/77.

b) Cryptantha scoparia A. Nels. Discovered in the Inyo Mountains 7/20/71.

c) Cymopterus ripleyi Barneby. Discovered in the Coso Range. 4/27/74.

d) Draba cana Rydb. Discovered in the Convict Creek headwaters area at 10,700 feet, 8/2/77.

e) Eriogonum puberulum S. Wats. Discovered 7/7/78 on the summit of Tin Mountain, 8950 feet, in Death Valley National Monument.

INDEX -- Mary DeDecker

Regional Oral History Office
The Bancroft Library

University of California
Berkeley, California

Women in Botany Project

Elizabeth McClintock

CALIFORNIA ACADEMY OF SCIENCES CURATOR, ORNAMENTAL PLANT SPECIALIST

With an Introduction by
John Hunter Thomas

An Interview Conducted by
Carol Holleuffer
in 1985

ELIZABETH McCLINTOCK

1985

Photograph by George Waters

TABLE OF CONTENTS -- Elizabeth McClintock

INTRODUCTION

Last summer Elizabeth McClintock was awarded the Liberty Hyde Bailey Gold Medal of the American Horticultural Society. This honor represents one of the most prestigious awards in the field of horticulture and the systematics of ornamental plants in North America. As a reflection of the quality of her work in horticulture I know that this award pleased Elizabeth very much.

I first met Elizabeth McClintock on February 4th, 1949. Professor Ira L. Wiggins of Stanford University, a long-time member of the Board of Trustees of the California Academy of Sciences, its president, a fellow, and recipient of its fellows' medal, and Mrs. Roxana S. Ferris, a member of the curatorial staff of the Dudley Herbarium of Stanford University, took me to San Francisco to be introduced to the botany department staff at the academy. I was in my first year as a graduate student at Stanford. My master's thesis was on the Onagraceae, evening primrose family, of the Sonoran Desert, and as such I needed to examine herbarium specimens at the academy. It was there that I met Elizabeth and over the years I got to know her very well.

For many years Elizabeth worked hard at the academy, but she never received the salary, support and respect she deserved. Elizabeth's account in her oral history of her association with the academy may seem exaggerated, but it is not! She was discriminated against, yet she managed to accomplish a great deal of exceptionally good botanical research. In addition, Elizabeth was helpful to hundreds of people, students and the general public, who came to the academy with botanical and horticultural questions.

Although I spend most of my time at Stanford as a profeasor of biological sciences, I know the department of botany at the academy very well. I have used it many times and since 1969 have been a part-time curator of botany there. In 1958, as an academy field associate, I did field work in Baja California under the auspices of the Belvedere Scientific Fund, established by Mr. Kenneth Bechtel. Since 1961 I have been a fellow of the academy.

Unfortunately, I have learned that if one does not agree with the director of the academy this is taken as disloyalty not only to the director but also to the institution. For some reason (which should be the subject of a whole essay) natural history museums and the like seem to be the last bastions of dictatorship among academic and scholarly institutions in the United States. It is strange that a former academy director did not consider that knowing about the systematics of ornamental and horticultural plants—Elizabeth's area of expertise--was a worthwhile activity. That former director at the time of Elizabeth McClintock's retirement essentially told me: We certainly wouldn't want to replace Elizabeth with anyone in that area.

Perhaps the cruelest blow to Elizabeth McClintock was that upon retirement she was not accorded an emeritus title. This was almost unheard of at the academy. In addition, she was told to take her things and get out, something else almost unheard of at the academy. I personally have done about everything I could to get Elizabeth an emeritus title. I talked to the botany department staff at the academy, but only one other person would even consider helping, but was afraid of the wrath of the director. I talked to two former members of the board, Dr. Lincoln Constance and the late Dr. Richard Jahns, who was at that time dean of the School of Earth Sciences at Stanford. All to no avail.

Fortunately, Dr. Lincoln Constance and Dr. Robert Ornduff of the Department of Botany at the University of California arranged for Elizabeth to have an honorary title there. So today when Elizabeth McClintock writes a paper she indicates that she is at the University of California at Berkeley and not at the California Academy of Sciences where she spent the major part of her botanical career.

In addition to her contributions as an ornamental plant specialist, Elizabeth McClintock's efforts in plant conservation were also significant. I will mention only two, San Bruno Mountain and the dune tansy, Tanacetum camphoratum. (The dune tansy is a tale by itself and should be written up as an article.) Elizabeth has lots of friends, and their highest respect as she continues to be active in her field. In the United States today Elizabeth McClintock is one of the few real experts in the systematics of ornamental and horticultural plants. To their great misfortune the California Academy of Sciences has lost her expertise.

John Hunter Thomas
Professor and Director
The Dudley Herbarium
Department of Biological Sciences
Stanford University

December 1986
Stanford, CA 94305

INTERVIEW HISTORY

Elizabeth McClintock's contributions to botany are many. For nearly thirty years as herbarium curator at the California Academy of Sciences she helped build and preserve the academy's collection of California native flora and ornamental plants. In this capacity, she assisted countless Californians in identifying their botanical specimens--sometimes rare species from the wilds, often a favorite garden ornamental or a little-noticed weed. Her educational contribution will live on through her numerous publications, the most recent of which, a book on poisonous plants of California written with Thomas Fuller, is soon to be published by UC Press. She has also played a role in preserving Bay Area plant life, from the flora of San Bruno Mountain to the dune tansy at Ocean Beach. Thus, her selection as an interviewee for the California Women in Botany Project was a natural one.

She was interviewed by Carol Holleuffer on March 21, 1985. The interview transcript was lightly edited for clarity and accuracy and reviewed by Ms. McClintock. The tapes are on deposit at The Bancroft Library.

Ann Lage
Interviewer-Editor

12 January 1987
Regional Oral History Office
486 The Bancroft Library
University of California at Berkeley

Regional Oral History Office
Room 486 The Bancroft Library

University of California
Berkeley, California 94720

BIOGRAPHICAL INFORMATION

(Please print or write clearly)

Your full name Elizabeth May McClintock

Date of birth July 7, 1912 Place of birth Los Angeles, CA

Father's full name Arthur Polk McClintock

Birthplace Chicago, Ill.

Occupation Merchant

Mother's full name Margaret Cristina Stoveken McClintock

Birthplace Kaukana, Wisconsin

Occupation Housewife

Where did you grow up ? Southern California, after age 8, San Jacinto, Riverside Co.

Present community San Francisco

Education BA. University of California, Los Angeles MA.

PhD. University of Michigan

Occupation(s) Retired botanist. Research Associate, The Herbarium, Department of Botany, University of California, Berkeley

Special interests or activities Although retired, I continue to actively on various botanical projects

I travel whenever my limited budget allows it.

I PERSONAL BACKGROUND

[Date of Interview: March 21, 1985]##

Childhood and Early Schooling

Holleuffer: It's March 21st, the first day of spring, 1985, and I'm in the University of California Herbarium with Elizabeth McClintock. Elizabeth is now a research associate, I believe, (is that the correct term?) with the herbarium. Where did you grow up? What sort of area was it? Was it rural or city?

McClintock: I grew up in southern California, in Riverside county in a little town called San Jacinto--the foot of Mount San Jacinto. A 10,000 foot mountain and the valley's 1500 feet, so I never think a mountain's very high unless it's 9,000 feet above. [laughs] It was a small town, rural, very nice.

Holleuffer: Did you do your first botanizing there?

McClintock: I didn't really botanize there. I think I was probably always interested in plants, although I don't have any specific recollection, and nobody that I knew was interested in plants. Except when I was in the fourth grade I had a teacher who told us what some of the plants were that were growing around in the spring. And so, I was interested in that. But then I never had anyone else to tell me anything until later when I attended Riverside Junior College.

Holleuffer: Your parents weren't--?

This symbol indicates that a tape or segment of a tape has begun or ended. For a guide to the tapes see page 28.

McClintock: No, not particularly. I mean, you know, they weren't any more interested than just not interested. It wasn't that they were disinterested, but I can remember plants that I saw way back in those early days. I can remember the first plants that I learned the names of, the common names of.

Holleuffer: What were--?

McClintock: Indian paintbrush, owl's clover, lupines, brass buttons, and some things like that. And then I remember the plants that were around our house. We had oleanders, and olive trees, and Vinca major which died down in the summer (and I used to water it so it wouldn't die down), honeysuckle Lonicera japonica, honeysuckle vine, Campsis radicans, a well-known shrub, Euonymus japonica, a small tree--no, it was really a shrub. Also we had three palms: two I learned later were the California fan palm, Washingtonia filifera, and the third was the Canary Islands date palm, Phoenix canariensis. We used to eat the small edible dates of this palm. Then there was a thing that we always called Easter lily, which I know now wasn't an Easter lily; it was a Crinum. Although, the interesting thing is I'm really not sure that I've ever seen that Crinum any place else. [laughs] Every time I see a white flowered Crinum, I wonder if that's the one. Anyway, I do have these recollections of plants.

As I recall they were all planted when we moved to that house. All were what we know call low maintenance plants. But whatever care they needed I gave them.

Holleuffer: It sounds like you had a garden.

McClintock: I really didn't do that much gardening. My father didn't try to have a garden, and neither did my mother. We didn't really do too much gardening, although I had a few plants I grew: China aster, periwinkle, African daisies, petunias, and a few things like that, but nothing too extensive.

Holleuffer: Did you go to grammar school and high school there?

McClintock: Yes, we moved there when I was in the third grade.

Holleuffer: Were you born in California?

McClintock: I was born in California, and then we went to Arizona. I was the oldest child of my parents, and we went to Arizona when I was a little baby. We came back from there when I was six. When I was eight we moved to San Jacinto where we stayed for twenty-five years. My parents finally moved away from there twenty-five years later.

Higher Education

Holleuffer: When did you really decide to be a botanist?

McClintock: I went to a junior college in Riverside, and there I kind of got interested in zoology. I had Edmund Jaeger as a teacher, Edmund C. Jaeger.

Holleuffer: Oh, I know his books.

McClintock: Yes, he was a very interesting man.

Holleuffer: Can you talk about him a little bit?

McClintock: Oh, yes, I remember him very well. He was a dapper young man. He died recently at the age of about ninety. He was a good teacher. He liked his students.

Holleuffer: Did he take you on field trips into the—?

McClintock: He took boys on field trips into the desert. He went to the desert every weekend, but he never took any girls. He would take the girls—he would take the class out, locally—little field trips—the year I took zoology from him. Weekends he would go to the desert, but he never took girls.

Holleuffer: Did you ask?

McClintock: No! I didn't have sense enough in those days to ask. I didn't think anything about it. That's just the way things were.

Holleuffer: It didn't seem odd to you that the girls—

McClintock: Oh, no. Heavens no. Women were a low form of animal matter and they still are. (I've certainly found that out, unfortunately.) But anyway, he was a very nice man. He was always nice to me. I was one of the few girls, I guess, that ever got an "A" from him. Years later, I used to see him once in a while, while I was still living in San Jacinto. After that I didn't see him anymore—it must have been twenty or twenty-five years. Then he was in the [San Francisco] Bay Area; he was at Stanford [University] one time. I think maybe it was a meeting of the Botanical Society. Anyway, it was a meeting, and he came. I went up to him and introduced myself. "Oh yes, I remember you." Well, he looked at me, and he said, "Say, you look pretty good." Then he said, "What about your brother Jack?" And, Jack wasn't a very good student—wasn't the best student in the world—but he remembered

Jack. [laughs] That was the only time I ever saw him then, in later years.

Holleuffer: These were zoology classes that you took from him?

McClintock: Yes, I took zoology from him. Then I took botany.

Holleuffer: From Jaeger?

McClintock: No, he didn't teach botany; he just taught zoology. But, there was a very nice man there who taught elementary botany. This man was Professor McCarthy. Oh yes, and then, in the spring, I took a course taught by somebody who had been a student here once upon a time. Annetta Carter knows her: Ruth Cooper. She taught a class called "Identification of Spring Wildflowers." I think that was when [Philip A.] Munz's A Manual of Southern California Botany first came out. I can't remember whether I bought my copy at that time or whether I bought it later. I can remember that was my introduction then to really trying to find out something about plants.

Holleuffer: Did you go around on your own with the book?

McClintock: Well, I guess so; I don't especially remember now. I went after that to UCLA [University of California at Los Angeles]. I took botany there.

Holleuffer: Was it unusual for a person from your area, San Jacinto, a woman—I should say—to think of college and a professional career at that time?

McClintock: I don't know that I was thinking so much of a botanical professional career. No, I don't think too many girls—I don't think too many people from there ever even went to college. Some of them went to Riverside Junior College--a few went to other junior colleges. Not so many of them then would continue on.

Holleuffer: How did you get the notion?

McClintock: Oh, I just thought that was just what everybody did. In a way I knew that everybody didn't do it—but enough people did—three or four people—so it was something which was done.

Holleuffer: What did you have in mind at that time that you were going to do?

McClintock: I was going to be a teacher, and probably a high school teacher—teach botany or biology. So, when I went to UCLA, I would have been a biology major, except that they didn't have biology. They had botany and zoology. Botany was a separate department and so

was zoology. So, I had a major in botany and a minor in zoology at UCLA. (Later the departments were combined.) But then I took the usual botany major courses and I decided that I was really interested in taxonomy. I sort of emphasized that. (We had a nice group of people at UCLA, and we used to go on field trips.)

Holleuffer: Did you have a club, like the Calypso Club?

McClintock: It's interesting; at the time that I was a student we didn't have a club.

Holleuffer: These are about what years?

McClintock: In the 1930s. Later, in the late 1930s, we had a club, and that club still exists. Not quite the same, but they still meet, have get-togethers, and I missed one with them just a week or two ago. I met with them at one of their gatherings a year ago. They don't often happen to have a gathering when I am in Southern California; actually they don't meet very often. But, they get together once in a while, and they're still some of the same people that I knew when I was at UCLA.

Holleuffer: Were there many other women in your class?

McClintock: At UCLA?

Holleuffer: Yes.

McClintock: There were a few. I still keep up with two or three of them.

Holleuffer: Did they go on also to become natural scientists?

McClintock: No, no they didn't. They both got married as a matter of fact. Although one of them has helped her husband a great deal. She married a plant pathologist, Doctor Kenneth F. Baker. She's done a lot of work with him. The other one married a botanist too. In fact, she married one of the fellows—one of the classmates there. But, she just seemed to drop her interest in botany after a few years.

Holleuffer: What can you recall as an undergraduate? What sort of opportunities were open to you as a woman?

McClintock: The only thing that was open was teaching. I got a high school teaching credential. But then I didn't use it, because afterwards I went to work in the herbarium at UCLA during the war years.

Holleuffer: Did you consider going on for your Ph.D. at that time?

McClintock: I might have, if the war hadn't come along right when it came. I might have gone to graduate school someplace or done something else. But then, during the war it was kind of hard to try to do anything.

It wasn't until after the war, a couple of years after, that I then decided to go to graduate school. I already had a master's degree. I'd gotten a master's degree at UCLA, and had worked on a taxonomic botanical problem. I did a monograph of the genus Monarda in the Labiatae. I worked under one of the men in the Botany Department at UCLA, Professor [Carl C.] Eppling, who was interested in the labiates--the mint family. He did a lot of monographic work in the mint family, and he had a number of students. (At that time UCLA had a graduate program for the master's degree but no program for the Ph.D. That didn't come until well after the war.)

I got a master's degree. Then the war came along sometime after that. I decided to just continue to work there. Then when the war was over, I decided--

Holleuffer: Was it money that really made you work rather than go to school? Was that the problem?

McClintock: Yes, that was part of the problem. Yea, that was a good part of the problem. But everything was disrupted during the war. You young people don't realize that the war overnight changed everything; nothing was the same. You just can't imagine how everything was changed. All we thought was the war effort.

Somehow or another I didn't get involved with anything having to do with the war effort. It was really quite impossible to think about going anywhere and doing graduate work. (It might not have been so difficult.) I had thought I'd like to go East. But to go East then didn't seem very feasible, since I didn't have very much money.

Holleuffer: Can you recall what you were paid as a herbarium worker?

McClintock: Not much! It was enough to live on in those days. After all, that was the 1940s, and we didn't need much money. I don't know what it would have been. Couple of hundred dollars a month? Or maybe less. Probably something like that; I just don't remember. I remember I had a little apartment that I think I paid about fifty dollars a month for. Something like that.

Holleuffer: Were you living on your own?

McClintock: Oh yes, sure. Things just were different during the war, and there wasn't much of a chance to do very much. And I never seemed to be too inclined to go into the WACS [Women's Auxiliary Army Corps] or the WAVES [Women Appointed for Voluntary Emergency Service: the Women's Reserve of the United States Naval Reserve] or something like that. I never really gave that much thought.

At UCLA, for instance, my goodness, there were not very many students. Certainly, there weren't very many in botany.

Holleuffer: How many in botany?

McClintock: Three or four, that is botany majors. The university itself didn't cease to function, by any means. Not at all, there were plenty of students. There were a few programs related to the war effort in which there quite a few students but in many departments the number of students was low.

Holleuffer: There must have been almost as many professors as students?

McClintock: In the botany department, yes. There were almost no fellows around. They were all gone--off to the war. And lots of girls went into war work; I might have done that if I hadn't been working in the herbarium.

Holleuffer: Were your teachers then also women?

McClintock: There was one woman in the botany department: Flora Murray Scott. She was Scottish; she was very good. She lived to be ninety; she only died within the last couple of years. She was very much the individualist, but I don't think she ever thought of herself as being unusual because she was teaching in a position like that, along with men.

Holleuffer: What year did you go to Michigan?

McClintock: Oh, that was 1947--fall '47. I don't know why I happened to go there except I was looking for a place which offered assistantships--I wrote two or three places. I wrote to Cornell and I wrote to Michigan, and maybe one or two other places. I got the quickest response from Michigan so I went there. And I decided to work in taxonomy. I worked with Rogers McVaugh. That was it.

Holleuffer: You specialized then in a particular family of plants?

McClintock: For my doctoral dissertation I worked with the genus Hydrangea in which I'm still interested.

II CALIFORNIA ACADEMY OF SCIENCES AND UNIVERSITY OF CALIFORNIA

Ornamental Plant Collection

Holleuffer: When did you come back to California?

McClintock: I came back before I finished my Ph.D. degree; that was when I went to San Francisco.

Holleuffer: To the [California] Academy of Sciences?

McClintock: Yes.

Holleuffer: About what year then?

McClintock: 1949.

Holleuffer: Who was head of the Academy then?

McClintock: At that time there was a very nice director: Robert C. Miller. He died about a year or so ago.

Holleuffer: And he was responsible for hiring and—?

McClintock: Yes.

Holleuffer: What was your position there?

McClintock: I was an assistant curator when I started.

Holleuffer: In botany?

McClintock: In botany.

Holleuffer: How many other people did they have in botany?

McClintock: They only had one other botanist, and that was John Thomas Howell.

Holleuffer: Who is still there?

McClintock: Yes, he's there, retired. I am also retired now, but I am no longer there.

Holleuffer: Do you want to elaborate about your time with the California Academy of Sciences? It seems like you had a rather unhappy ending?

McClintock: Well, the director did not like women in curatorial positions. He had no use for women. And if a woman was working there, he did everything to let her know he didn't think that she was much. Of course, he didn't like John Thomas Howell either, so he did very little for the botany department all the years he was there. Other departments had secretaries; other departments had other amenities, but he saw that the botany department never did. Of course, I never received a salary comparable to the men's; he didn't seem to think women <u>needed</u> salaries.

Holleuffer: Did he consider that their work just to be something like a hobby?

McClintock: Just like—you're just treated like a secretary.

Holleuffer: Was your salary—?

McClintock: No, I always got the lowest possible salary.

Holleuffer: Even though you were doing the same work as—?

McClintock: Yes, that's right.

Holleuffer: You're speaking of George Lindsay?

McClintock: I <u>am</u> speaking of <u>George Lindsay</u>.

Holleuffer: How long was he director?

McClintock: Unfortunately, <u>too</u> long. For over twenty years. Twenty-five years, I guess, he must have been director. Because I retired in 1977, and he didn't retire until several years after that. He came about the middle 1960s, '63 or something like that.

Holleuffer: Why did you stay on?

McClintock: Because by the time he came I wasn't young anymore, and he wasn't so bad the first few years, you know. But things just kind of got worse--they got particularly bad when Howell retired at the start of 1969.

By that time I couldn't think of going someplace else; I was too old. You know, you just don't [hah] march out of a position. And I suppose if I realized what he was going to be like when he came, I could have gone somewhere else because that was, as I say, the early 1960s.

Holleuffer: What were your responsibilities there; what did the botany department do?

McClintock: I took care of the collection--took care of the herbarium collection.

Holleuffer: You didn't actively collect more things; that was part of something else--?

McClintock: There was no support for doing field work, so I didn't do very much collecting. I did a lot of collecting of ornamental plants. In fact, I built up the herbarium there, from the standpoint of ornamentals--the ornamental flora--rather than the native flora. That herbarium has the--they don't realize it and there's nobody there now who's interested--but they have an outstanding collection of California ornamentals. But nobody's interested in them. And of course, unfortunately, the director, Lindsay, did not consider ornamentals to be plants. And I found this out later, that Lindsay considered anyone who worked on the ornamental flora not to be a botanist at all.

Holleuffer: He considered that you were a nurseryman or what?

McClintock: He looked upon ornamental plants as being of no value. He didn't realize that there is such a thing as the taxonomy of ornamental plants. He didn't understand what that was all about. There had been (and continues to be) a considerable public interest in ornamental plants just as there is in native plants, and that was my reason for collecting them. After Mr. Howell retired as chairman of botany Lindsay told me that he was now acting chairman of the department.

Holleuffer: And you were the sole employee?

McClintock: I was the sole botanist. So I asked, "Well, what am I supposed to do?" "Well," he said, "you just run the place." Of course that meant just continue to do what I'd been doing. In other words, there was no time for doing anything besides just the

routine day-to-day answering the telephone, filing plants, taking care of inquiries. Just doing the usual administering of the herbarium.

And then it was interesting that right at that time of Howell's retirement, there was an NSF [National Science Foundation] grant--a facility grant for the department--to take care of the things that needed to be done. And the herbarium had thousands and thousands of unmounted specimens. So there was money then to hire one person which it turned out was divided between two people--students from San Francisco State to come and work, do mounting and other things having to do with taking care of the tremendous backlog of specimens what had been built up over the years. So I organized that. By the end of the year Dennis Breedlove came, so there was another botanist, finally. But I was there for the first year all by myself organizing, trying to take care of all this extra help that we had. Oh, yes, we also had work-study students from San Francisco State University. When Mr. Howell was in charge of the department he had not wanted that kind of help.

The herbarium there is in good shape. It's in good shape because of my work. And also because of John Thomas Howell. But I get no credit. I'm not credited with anything. Howell, when he retired of course, was named curator emeritus, and he was given working space to continue to be on the staff.

When I retired I was told by Lindsay that there was no place for me. Actually he said, "We have no place for you anymore. Remove your personal belongings by the end of the month."

Holleuffer: Goodness!

McClintock: So my connections there were severed completely--irrevocably. It's just as if I had never been there.

UC Research Associate##

Holleuffer: After you left the [California] Academy of Sciences in 1977, did you come directly to the University of California Herbarium?

McClintock: No, I didn't. It was probably a year or so later that Lincoln Constance and Robert Ornduff suggested that I might be a research associate here. So I thought that was good. At least it gave me a title somewhere. I really wasn't so interested in having space; I was doing some other things--finishing up a couple of

things. I didn't really need space, and I've continued to be a research associate ever since. You get these appointments renewed every year or every two years, I've forgotten. Anyway you just ask for a renewal of your appointment, and I had it ever since.

Holleuffer: What does that appointment involve? It doesn't pay anything, does it?

McClintock: No, no, it doesn't. I don't expect to be paid. I live on my social security. I get from the California Academy of Sciences only a small annuity. The reason I don't get more of an annuity is because the salary that I was paid was very low.

Holleuffer: What was the salary?

McClintock: Oh, I can't remember what my salaries were. But, they were low, about the salaries that you paid the janitors, or a typist, or somebody like that. The retirement plan that they had didn't start until some ten years or so before I retired; according to the plan your annuity was based on your salary.

Holleuffer: Not on the number of years you worked?

McClintock: No. I only paid into it for ten years, you see. If my salary had been higher during those ten years I would still have gotten more out of it. But because I got such a low salary my annuity is also low.

Holleuffer: How many years total had you worked for them?

McClintock: I worked for them for nearly thirty years. But, they didn't have the retirement plan during all of those years. We had social security, not from the very beginning of the time that I came there, but a few short years afterwards. This retirement system didn't come until about ten years before I retired. And as I say, it's one of these annuities that depends on what you pay into it.

So, I was given an appointment as research associate here, and I've used that title and that affiliation ever since.

Holleuffer: What sort of things does that enable you to do? Free stationery? Secretary?

McClintock: No, not a secretary. But then I've never had any secretarial help. I do get stationery; I can write my own letters on them if I want to. It just simply means that I <u>can</u> have a space, and this

desk. I can use the facilities here, the herbarium, the library, and I can cite myself as a research associate.

Holleuffer: If you publish, do you have—?

McClintock: If I publish I can mention the University research associate appointment. I've just finished a book on poisonous plants, and I've listed my affiliation with the herbarium here at the university.

Holleuffer: It lends more credence.

McClintock: Yes, that's right. I'm glad to have it. It'a very nice for me to have some affiliation with an institution.

III CONSERVATION CONCERNS

California Native Plant Society Origins

Holleuffer: I know that you said that you became very interested in ornamental plants, and I know that your specialty is escaped exotics, otherwise known as weeds.

McClintock: [laughs] Well, that's a recent specialty; that's not really my specialty. But I did say that, when the California Native Plant Society needed a chairman for the committee they have on escaped exotics, and no one came forward to be chairman of this committee, I said, "Well, I would be the chairman of the committee."

Holleuffer: Were you one of the founding members—?

McClintock: Yes, I was a charter member of the California Native Plant Society but I can't remember when it started.

Holleuffer: When did it start? How did that come about?

McClintock: Oh goodness, I can't remember exactly how many years ago, whether it was twenty years ago or something like that. It's on record somewhere. It came about because of a problem with James Roof, who was director of the regional park's botanical gardens. Roof was a kind of cantankerous man, and he didn't get along with the administration—I guess it was the head man of the regional parks, I've forgotten. So, some people got together, Rimo Bacigalupi and a few other people. They started a little support group for the botanical garden. The botanical garden was being threatened and that was the problem.

Holleuffer: Which garden, the Tilden one or—?

McClintock: Tilden Regional Park [East Bay Regional Park Botanic Garden], the garden of native plants that James Roof was the director of.

Finally, they did as much as they could for Roof, and then the group just sort of organized itself into the California Native Plant Society. It's been going ever since.

Holleuffer: With the goal of preserving California flora?

McClintock: Yes, conservation matters that would lead to the preservation of California plants. One of the first things that they did, and this I do remember the year, 1968--Ledyard Stebbins was president. (This was long before people really were talking about preserving and inventorying rare plants. This was before; these inventories didn't start until two or three years later.) So, Ledyard Stebbins suggested that the California Native Plant Society start an inventory of rare plants in California. Not so much endangered plants, but just rare plants.

Out of that, then, did come rare and endangered plants and making a record of them, finding out where they were, what their problems were. After a couple of years other states began to work on the same thing. But California was the first state to have an inventory of its rare and endangered plants. That was done through the efforts of the California Native Plant Society. And, they are still doing it.

They're still supporting that program, but of course the program has come a long ways. It's now tied in with a database which is part of the California Fish and Game Department. The California Native Plant Society supports one botanist for the database. So, they've really made a contribution in that respect. Their membership has grown now to--I don't know how many thousand. Well, it's less than ten thousand, but they have a sizable membership throughout the state. Chapters throughout the state, so they've done very well.

Escaped Exotics

Holleuffer: Elizabeth, you have an article in the current issue of Fremontia, the January 1985 issue, on escaped exotic weeds in California. At the beginning you say, "The introduction of exotic plants into California began in May 1769 when Father Junipero Serra established the first European settlement at San Diego. At least sixteen species of exotic plants were established in California during the Spanish colonization. Sixty-three additional species during Mexican occupation and fifty-five more during American pioneer settlement."

McClintock: Yes.

Holleuffer: But it seems like we now—it says, "by 1968 there was a total of 975 introduced plants; these are rapidly becoming a great problem."

McClintock: They're not all becoming a problem.

Holleuffer: But there are some that are.

McClintock: Of course, not all of these weeds spoken of here are serious problems, and they're not all escaped exotics. These 975 weeds that are being talked of in the Fremontia article are just weeds in general. Not all of them are problems. But the state department of food and agriculture has a section on plants—a plant division or whatever they call it—that works with pest and rodent control, and weed control. They have one botanist—they used to have two—but they have one botanist now who works on the identification of weeds and makes recommendations for their control and eradication.

The weeds that I'm particularly interested in—and that the [California] Native Plant Society is interested in—are mostly weeds that don't come under the jurisdiction of the state department of food and agriculture. The state department of food and agriculture is concerned with weeds that are of importance to agriculture.

Holleuffer: The crops, in other words.

McClintock: Yes, the agricultural crops, and what weeds interfere with good production or the successful production of agricultural crops. It's very important to eliminate weeds which interfere with agriculture.

But there is another group of weeds (and I mentioned that in the Fremontia article that you mentioned) which don't interfere with agriculture because they're not on agricultural land. And those are the weeds that have been called escaped exotics, which isn't a very good term, but it is the term that the [California] Native Plant Society has used for those weeds which have come into the state intentionally as ornamental plants. I made a survey and I found out that there are about a hundred plants that have come in as ornamental plants, and have escaped, so to speak, from their planted areas. Though some have not escaped very far, some just stay within urban areas. But some get out to the edges of the urban areas. And then, there's some—and really probably in California only about fifteen or something like that, or maybe

even less—that are really bad: aggressive weeds. Examples of these are the brooms: french broom and scotch broom and gorse.

Holleuffer: What about the eucalyptus?

McClintock: Eucalyptus is not so bad, but the blue gum eucalyptus, Eucalyptus globolus, does spread to some extent. It's not one of the worst ones. Pampas grass is another very bad one. It has spread up and down the state. And, there's another grass, for instance, which is spreading called fountain grass. Anyway, there are a number of plants originally grow as ornamentals which have escaped and have become weedy.

Holleuffer: Is it the problem that they threaten the habitat of the native plants?

McClintock: Yes, they move into the habitat of native plants. That's why the native plant society became concerned, because they could see that the native plant habitats were being destroyed. Native plants were being just out competed by things like the brooms, the pampas grass, and two or three others.

There's a tamarisk, for instance, which is very bad on the desert. It moves along stream channels, clogs up the stream channels, but also does away with the riparian vegetation, plants which would normally grow along the streams. It's a very bad aggressive plant in certain areas of the desert.

Holleuffer: And again, it eliminates plant diversity.

McClintock: Yes, yes, that's right because then you just have a monoculture, too. Yes, for instance, there are places in Marin County where the french broom has taken over large areas, and it's the only plant that grows there. Pampas grass has never become that thick in any area, but probably, given enough time, it could. Gorse has become very thick in some areas, and it is so difficult because it's got sharp spiny stems, and the seeds are numerous and last a long time in the soil and apparently are very fertile.

Holleuffer: That's the trouble with weeds; they're always very tough.

McClintock: Yes, and so you have these plants which become so well established.

Holleuffer: Through ignorance. Wasn't it the policy of the California Department of Transportation [CALTRANS] to plant a lot of these ornamentals along highways? Didn't it really contribute to the—?

McClintock: To some extent. I mean I don't think we can completely blame CALTRANS because escaped exotics were being planted by others also--they were being sold in the nurseries, and they were being planted by home gardeners, landscape architects, and developers. I think that CALTRANS did, for instance, plant pampas grass, and probably they are responsible for planting pampas grass along some of the highway areas.

Holleuffer: What is your plan to eradicate these plants or control them?

McClintock: I don't have any plans for eradication or control.

Holleuffer: Can you stop the nurseries from selling them?

McClintock: That's one possibility. But, as with all kinds of things like that, it's too late. You know, it's like the sewage problems, waste disposal, nuclear waste and all those things. Now we're getting concerned but it's too late. The waste is already there. The weeds are already there. I don't know what you can do to eliminate something like french broom in areas where it's just taken over.

California Native Plant Society and Conservation Activism

Holleuffer: There are small projects, as I understand, in certain limited areas to try and go out--you almost have to dig these plants up piece by piece.

McClintock: Probably in some cases there would be some herbicides that could be used, too. But, the [California] Native Plant Society has gone on record as not wanting to sponsor herbicides. But they may be glad to have a few biodegradable herbicides.

Holleuffer: You were telling me the other day about a woman who had called you and who was very upset about the eucalyptus trees.

McClintock: Oh. she wasn't too upset about it. No, she didn't call me; she wrote. She lives in the Santa Cruz area where the monarch butterflies come. The monarch butterflies, of course, originally nested in native trees but the native trees are being eliminated, and so they have begun to nest or take up habitation in eucalyptus groves. This woman felt that the [California] Native Plant Society was doing a very bad thing by advocating the removal of all eucalyptus trees. I wrote and told her she didn't have to worry; the eucalyptus was here to stay in California. And, maybe, it probably would outlast the monarch. (Oh, I didn't

tell her it would outlast the monarch butterflies, but it might.) I suggested that if she knew of any area where the monarch butterflies really were being threatened by doing away with eucalyptus plantings and eucalyptus groves that she call that to the attention of the proper authorities. I don't know how much of a problem that is. I answered her letter; I haven't heard from her again.

Holleuffer: If you can't eradicate these things, what do you plan to do, then? What's your goal?

McClintock: I think the goal is to call attention to the fact that these plants are here and that they are taking over undisturbed native habitats—or areas where native plants should be growing—and try to educate people to become aware of them. And try to not have them planted.

CALTRANS has been cooperative; they are trying. They no longer plant some potentially weedy things; they no longer plant pampas grass. I don't know how much planting they have done of the brooms; I don't think they have planted the brooms. Or the acacias over in Marin county; I think those brooms and acacias there came from garden plantings. CALTRANS would be cooperative, once they become aware of the fact that some plants are aggressive.

Holleuffer: I have secret knowledge of your license plate number. [laughs] What is the significance of your license plate, Tansy?

McClintock: That was a conservation matter in San Francisco several years ago. There was a piece of land out at the western end of San Francisco—out by the Cliff House—that was being threatened by a developer. There was another piece of land that belonged to the City of San Francisco. It was adjacent to this land which was going to be developed.

Holleuffer: Was that the Playland project?

McClintock: It was part of the Playland project. The developer was going to develop right adjacent to the land that belonged to the city. The Sierra Club became concerned because it was pretty obvious that in developing his land the developer would go across the property that belonged to the city. And they would have. You know—why shouldn't they--it was open land, nothing on it but a few plants that looked like weeds.

We found out that among these plants a rare plant called Tanacetum camphoratum was growing on this piece of land that belonged to the city and that it was a rare plant. It was one of

the plants on the California Native Plant Society's rare and endangered plant list. So we had some negotiations; we had a couple of hearings before the planning commission. And the developer signed an agreement that he would not use the city land in any way whatsoever in getting to his project that he was going to develop. This was the time that I decided to get a personalized license plate, so I chose Tansy for mine. That's how that came about. It's been quite a few years ago; now I think Tansy is out-dated. I'm sorry that I didn't choose something that is not so dated. Anyway, I still have it.

Holleuffer: What other conservation issues have you been involved with?

McClintock: Well, I've been involved with San Bruno Mountain which was certainly a conservation issue. I wrote a flora of San Bruno Mountain. San Bruno Mountain has only in part been developed but the development project has been going on for years and years. I did a flora with Walter Knight which was published over fifteen years ago. Everybody has used that flora, quoted, misquoted and everything else from it. People were paid thousands of dollars for using our flora.

Holleuffer: But you weren't paid to write it?

McClintock: No, we weren't paid to write it. Anyway that's just one of the things that happens.

Part of the mountain has been made a county park, but some of the portions to be developed are still undeveloped. There still is, I guess, a lawsuit going on in regard to, not so much preserving the mountain because of the plants, but preserving the mountain because of two rare endangered butterflies. I've been involved more or less with that. There wasn't really anything I could do except to say the plants are there: point out what plants are there. There were a number of rare plants, but nothing that was really of the magnitude of rarity of the butterflies. It turned out that it was not the plants that became the issue, as far as rare and endangered species were concerned, but actually it was the butterflies.

Holleuffer: Have you gone back since, recently, to see if the same plants are still there? Or to take an inventory?

McClintock: No, I haven't because there have been so many changes, and so many people have gone there. I go there every once in a while and walk around. The top of the mountain has suffered a great deal, since our first visits there. They've added many more radio and television broadcasting towers on the top of the mountain. That, unfortunately, has spoiled the top of the

mountain. There's a lot of activity on the mountain; lots of off-road vehicles go there. This has caused a certain amount of destruction of the plants. In spite of the fact that—oh, I've forgotten how many acres—a large portion of the upper part of the mountain has been made into a county park.

Holleuffer: Have you been involved as a consultant in many issues?

McClintock: Oh, not very many. All of these conservation projects are always losing projects. You know, you can't save San Bruno Mountain and Playland by the Beach. (Only part of that development materialized, but that was because the developer didn't have enough money as it turned out.)

There was another project that I was involved with, down in Woodside. There was a little serpentine grassland area that a developer wanted to develop, and there was supposed to be an environmental impact report. I was asked to do a list of plants.

Holleuffer: Asked by whom?

McClintock: It turned out that I was asked by a man who was a developer, but also he was a consultant for the township of Woodside. And he had more of an interest in being a developer than he had in advising the township of Woodside in regard to preservation matters.

I found out that there were some interesting plants and one rare and endangered plant: Hesperolinum congestum. I turned out that nothing could be done to save that piece of property. The developer got his development, and the man who hired me, who was consultant for the city of Woodside, I'm sure was actively engaged, in some way, in this development. So, he got his money. I did make about five hundred dollars for having done the plant list—that was one thing I was paid for. [laughs]

IV PUBLICATIONS AND PROFESSIONAL WORK

##

Field Trips

Holleuffer: We've been talking about your work as a consultant on an environmental impact statement and conservation matters. I wondered also about your publications and your professional work.

McClintock: I didn't have much time to publish all those years that I worked at the California Academy of Sciences. I published a paper on Hydrangea which I'd started as a graduate thesis problem, and that was published. I published the San Bruno Mountain Flora. Then I did other short publications, but we just didn't have time to do research. We had no assistants; we spent all of our time working in the herbarium.

I was interested in going to Arizona once upon a time, to do some collecting in the Grand Canyon National Monument area of northwestern Arizona.

Holleuffer: Who did you go with, by yourself?

McClintock: I went with Walter Cottam, Professor of Botany, University of Utah, who had been interested in that area. I had also made a couple of earlier trips to Arizona to collect plants. This was a good many years ago. Anyway, there was just no encouragement, no money given for field work, so I just didn't do as much as might have been done.

Holleuffer: Was that while you were at the academy?

McClintock: Yes.

Holleuffer: Were those camping trips?

McClintock: The three weeks at the Grand Canyon was a camping trip.

Holleuffer: Did you have mules to carry the plants?

McClintock: No, no, no. [chuckles] We carried them ourselves.

Holleuffer: You couldn't have taken very many specimens that way.

McClintock: Well, you'd be surprised. I carried them in a backpack; you can carry quite a few that way. I was quite a bit younger then.

Holleuffer: But you would have to carry water too.

McClintock: Oh, we were just out for a few hours at a time, just working out from a base camp. That was a nice area; that would be an area that somebody should go back to.

Holleuffer: Where exactly was it?

McClintock: It's on the northern rim of the Grand Canyon, north of the Colorado River, and you get to it by coming in from Utah--St. George, Utah.

Holleuffer: You come through House Rock Valley, that way?

McClintock: I don't know about House Rock Valley. I don't think so; House Rock Valley is somewhere else.

Holleuffer: Toroweap?

McClintock: It's Toroweap; that's right. Yes, and we were on the Toroweap Plateau, north of the Grand Canyon. This is a corner of Arizona that's cut off by the Colorado River and called the Arizona Strip.

Holleuffer: The Arizona Strip.

McClintock: You've been there?

Holleuffer: Yes.

McClintock: Oh. Well, we'll have to talk about that.

McClintock: So I didn't really do very much collecting. And, as I say, I really concentrated then on collecting ornamentals (and I did build up the ornamental herbarium).

Holleuffer: When you're collecting ornamentals, did you just go out along roads?

McClintock: Not necessarily along roads.

Holleuffer: People's gardens?

McClintock: Not so much people's gardens but, yes, certain ones. You collect in certain areas, parks. And I always went to the meetings of the California Horticultural Society. People would bring plants there, and I made herbarium specimens of those all through the years. So, there's a considerable amount of material that I had collected. It's made me a specialist in the ornamental flora of California.

Holleuffer: Which is quite unusual, isn't it?

McClintock: Yes.

Holleuffer: Most people specialize in natives.

Book Projects

McClintock: Yes, but the ornamentals are the plants that people see around them all the time in the urban areas where they live. They're the plants least known about. In fact—and I may do this, I don't know—I'm thinking of doing a book for the University of California Press on ornamental trees of California. I might do that, a future project.

Holleuffer: What's your current project?

McClintock: One thing I'm finishing up is an account of the Hydrangea family, a very small family in the southeastern United States which includes Hydrangea itself and Philadelphus. Only a few species of each and a couple of other small genera Decumaria, which has just one species. I was asked to do that, and it turned out that Philadelphus is kind of difficult, but I finally have just finished.

Holleuffer: Who will publish that?

McClintock: It's going to be published. It's part of the flora of the southeastern United States that's being done at the University of North Carolina at Chapel Hill. Last spring I visited Chapel Hill and met the man who's chief editor of the project, talked to him about it. So now I've just finished it.

International Conferences

Holleuffer: Do you attend many professional meetings of botanical societies?

McClintock: Yes, I used to try to attend the meetings of the American Institute of Biological Sciences. Would go to them--not every year--but maybe every year or so I would go.

Holleuffer: What about international--?

McClintock: I went to several of the international botanical congresses. I went in 1954 to the Paris Congress. I went to the Montreal Congress which was 1959, I think. I went to the Seattle Congress in 1969. I went to the Botanical Congress in Leningrad in 1975. And then the Congress in Australia, which was 1981. That was after I retired.

Holleuffer: How were you funded to go to these?

McClintock: I paid for everything I ever did myself.

Holleuffer: Goodness!

McClintock: I'm always, you know, I'm always so amused at people who have to get every last dime for everything they do.

Holleuffer: If you wanted to go, you went.

McClintock: If I wanted to go, I went, and I paid for it.

Holleuffer: At the ones in Leningrad and Australia did you have field trips afterwards?

McClintock: Oh yes, there were always field trips in connections with these. At the Paris congress there was really a very nice field trip into Algeria. I spent about ten days in Algeria.

At the Leningrad congress there was a field trip to Armenia. But, that was run by the Soviet Intourist; they didn't let us do

very much. Then the Australia trip was very nice. I went on a trip before the congress. I went with Annetta Carter and Mary Leo Bowerman, and there were other Americans on that trip. We went up to the northern territory, starting out in Darwin, and came down to Alice Spring and Ayers Rock. That was a very nice trip. After the congress, Annetta and Mary Leo Bowerman and I went to western Australia where I had been several years before. In 1977 I made a trip to Australia and New Zealand.

Holleuffer: A personal trip?

McClintock: Yes, right after I retired.

Holleuffer: On these field trips after the congresses, would you botanize or was it tourist--?

McClintock: We wouldn't collect; it's hard to collect when you're traveling like that.

Holleuffer: Were you with someone from the country who would know the native flora?

McClintock: Oh yes, oh yes, except the one to Armenia with the Russians. Even though that was a trip sponsored by the botanical congress it was run by Intourist. So we didn't get to see as much as we should have seen. We were a little disappointed at that. But that's the way Russia is. They don't want you to do anything on your own.

Holleuffer: At the congresses do you find that there are many other woman botanists? What sort of percentage are there women to men?

McClintock: There are a lot more men, but there are a few women. Women are sort of in the minority.

Holleuffer: I've been struck, here at the herbarium and also at the meeting that I attended of the California Native Plant Society, at the numbers of women. At the herbarium I think I've seen one man working here and all the rest have been women.

McClintock: Working, what do you mean?

Holleuffer: Working on the collections, putting plants into the holders.

McClintock: Oh, those are students.

Holleuffer: But they're only female students that I've seen.

McClintock: Oh, there are some men students; you haven't seen the men. No, there are men students here. Let's see—this is out of my realm—but there is a program here whereby the graduate students working in taxonomy with one of the faculty in taxonomy—[Thomas] Duncan or [Robert] Ornduff—do work in the herbarium, and I think they get paid. Now, I'm not sure; you'd have to ask. But there are at least two men students: Bob Price, who's working on Erysimum, and then there's another fellow who's working with a genus in the Scrophulariaceae. And there's Tania, the girl from Panama, Tania Belize.

Holleuffer: Do you think opportunities have changed for women since the time when you first entered botany?

McClintock: I don't know that much has changed.

Holleuffer: There still isn't a woman on the faculty, is there?

McClintock: Not here. But then this is—it's just like at the California Academy of Sciences; there are not very many women. And look what happened to me. Maybe in another generation—maybe by then, in thirty or forty years—if men become more liberal in their viewpoints. But the diehards have to die. Those who are really against women—they have to be gone entirely—and there have to be new ones with new ideas before women will ever be able to be recognized. I think a start has been made.

Transcriber and Word Processor: Marjorie Larney

TAPE GUIDE - Elizabeth McClintock

Date of Interview: March 21, 1985

Elizabeth McClintock. Biographical data. December 1985.

Address: 1335 Union Street, San Francisco, CA 94109. (415/474-1940)

Born: July 7, 1912.

Education: BA, MA University of California, Los Angeles.

PhD. University of Michigan, Ann Arbor.

Positions: Herbarium Botanist, 1940-1946, University of California, Los Angeles.

1949-1977. Staff, Botany Department, California Academy of Sciences, San Francisco, Retired, July 31, 1977 as Curator and Chairman of Botany.

1968-1970. Lecturer, Division of Biology, San Fran- State University.

1978--. Research Associate in the Herbarium, Department of Botany, University of California, Berkeley.

Dr. McClintock's specialized field in botany is taxonomy, the classification, nomenclature and geographical distribution of seed plants. Her plant collections have mostly been made in California but she has also visited and collected in other western states and in Mexico. During the late 1940s and early 1950s she made collection in Arizona, particularly in the White Mountains and the little known area of the western part of the Grand Canyon. She collaborated in 1960 in the publication of the Supplement to the Arizona Flora by Kearney and Peebles. She collected plants in and around San Franisco and in the 1960s made collections on San Bruno Mountain in San Mateo County. These were used as the basis of a flora of the area published in 1968. She has had a

2. Elizabeth McClintock. Biographical data.

long time interest in the plants and vegetation of the coastal sand dunes of San Francisco and in 1973 published two papers emphasizing one of the dune plants, the San Francisco dune tansy. (As a result of this and the controversy over the development of an area of these dunes her personalized license plate is TANSY.) She has also been interested in California's vernal pools and during the late 1960s and early 1970s she made a series of collections in a vernal pool area near Pixley, Tulare County, a natural area preserve that was acquired by The Nature Conservancy.

Dr. McClintock has been active in conservation and preservation of California's rare and endangered plants as well as representative segmants of the state's native vegetation. She has worked with the California Native Plant Society (CNPS), the California Natural Areas Coordinating Council (CNAAC), The Nature Conservancy and the Sierra Club. She helped CNPS with its inventory of rare and endangered species of California and CNAAC with its inventory of California's natural areas.

In addition to her work with native plants she is a specialist in the California ornamental flora, those plants cultivated for ornamental and landscape purposes in urban areas. During the course of her work on the ornamental flora she has published papers on various plant genera, including Erica, Erythrina, Metrosideros, Tamarix, Hydrangea, and Magnolia, as well as three checklists of California ornamental plants (1963, 1979, 1982). In addition she has made numerous collections of ornamentals. These are particularly valuable because this group of plants is largely neglected by other botanists.

3. Elizabeth McClintock. Biographical data.

The Strybing Arboretum of Golden Gate Park has no staff botanist and during the past thirty years Dr. McClintock has identified or verified identifications of the Arboretum's plants. She collaborated with the Strybing Arboretum Society in publishing its three Guide Lists (1958, 1970 and 1977) and is presently working on the fourth Guide List to be published in 1986.

For San Francisco's Golden Gate Park she has identified and listed most of the park's remarkable collection of trees and shrubs and provides information about them to staff of Recreation and Park Department. She published Trees of the Panhandle (1965). This small book was an outcome of the twice-proposed (mid-1960s) cross-town freeway that would have destroyed the panhandle and the northeastern border of the park. She actively participated in the controversies that resulted in the rejection of both proposals. In 1977 she published an account of the plants in The Japanese Tea Garden, Golden Gate Park. In 1976 she began a series of articles on the park's trees, which is being published in Pacific Horticulture. Thirty-four have appeared between 1976 and 1985.

Since the beginning of Pacific Horticulture in 1976 Dr. McClintock has served voluntarily as its Associate Editor. In this capacity she reads all manuscripts, accepted by the editor, for their botanical accuracy. Her botanical expertise and editing adds greatly to the prestige and educational value of this publication. Pacific Horticulture came into being when four societies cooperated to publish it, taking over the California Horticultural Journal from the California Horticultural Society. Since 1954 Dr. McClintock had served as Botanical Editor of the California Horticultural Journal.

Areas of research:

1. Labiatae, revisions of Monarda (1942) and Teucrium (1946). Review of Lamiales for Encyclopedia Britannica (1974).
2. Saxifragaceae, monograph of Hydrangea (1957).
3. Ornamental flora. Published treatments of various genera cultivated in California: including Erythrina (1949, ;953, 1956, 1969, 1982, 1985), Tamarix (1951), Hydrangea (1956, 1957, 1969, 1973), Erica, in part, (1950, 1952, 1979), Magnolia, in part, (1962, 1963, 1974), Metrosideros (1968).

Other publications include:

A Checklist of Woody Ornamentals of California (1963).

Guide List of Plants in Strybing Arboretum (1958 and 1970).

Trees of the Panhandle, Golden Gate Park, San Francisco (965).

Capitol Park Tree Tour Sacramento (1971).

The Japanese Tea Garden, Golden Gate Park, San Francisco (1977).

Trees of Golden Gate Park, a continuing series in Pacific Horticulture, volumes 37-46, numbers 1 to 34 (1976-1985).

An Annotated Checklist of Woody Ornamental Plants of California, Oregon & Washington (1979).

An Annotated Checklist of Ornamental Plants of Coastal Southern California (1982).

Collaborated with the staff of the Bailey Hortorium in preparation of Hortus Third (1976).

4. California and Arizona floras:

A Flora of the San Bruno Mountains, San Mateo County, California (1968).

Compiled an annotated list of plants in a vernal pool area near Pixley, Tulare County (a natural area preserve owned by The Nature Conservancy). Unpublished, distributed by TNC.

5. Eliabeth McClintock.....

4. California and Arizona floras...continued:

"Botanizing in Toroweap Valley in Northern Arizona"
the western area of the Grand Canyon (1952).

Supplement to second edition, Arizona Flora (1960).

Completed manuscripts (accepted for publication)

Poisonous Plants of California. A book to be published by the University of California Press, Berkeley. (With T. C. Fuller.)

Hydrangeaceae, the Hydrangea Family. A contribution to the Vascular Flora of the Southeastern United States, being published by the University of North Carolina Press, Chapel Hill.

Current (1985---) projects.

1. Reviewing for botanical accuracy the fourth Guide List to Plants of Strybing Arboretum, Golden Gate Park, San Francisco.
2. A taxonomic and nomenclatural review of Magnolia denudata and M. liliflora, with Dr. F. G. Meyer, National Arboretum, Washington, D. C.
3. Contributing a series of families to Jepson's Manual (a new flora of California) under way at the Jepson Herbarium, Department of Botany, University of California, Berkeley.
4. Reviewing the distribution and spread in California of introduced ornamental plants from cultivated into non-cultivated areas, which are becoming weedy. Project sponsored by the California Native Plant Society.
5. Working on a revision of the tropical American evergreen species (section Cornidia) of the genus Hydrangea.
6. Working on a revised key to Erythrina species in California and a treatment of Escallonia species cultivated in California.
7. Has begun a book Landscape Trees of California to be published by Dioscorides/Timber Press of Portland, Oregon.

Activities in professional and conservation societies:

American Association of Botanical Gardens and Arboreta. Member, Board of Directors, 1958-1963. Vice- president, 1962. President, 1962-1963. Member of its Nomenclature and Registration Committee.

California Botanical Society. President, 1968. Chairman, Archives Committee.

Strybing Arboretum Society of Golden Gate Park. Charter member and one of founders, President, 1956-1957. Member, Library Committee and Plant Collections Committee.

California Horticultural Society. Secretary, 1950-1960. Botanical Editor of its journal, 1954-1975.

Pacific Horticultural Foundation. Associate Editor of its journal, Pacific Horticulture, since 1976.

The Nature Conservancy. Member Board of Trustees, Northern California Chapter, during 1960s.

Sierra Club. Member, Executive Committee, San Francisco Bay Chapter, mid-1960s.

California Native Plant Society. Charter member and Fellow. Member, state-wide Board of Directors and Chair of its Escaped Exotics Committee.

Zoological Society of San Diego. Member, Botanical Collections Committee. Assists the San Diego Zoo with problems of naming some of their plants. Has identified their extensive collection of coral trees, Erythrina.

Miscellaneous.

International Registration Authority for the genera Hydrangea and Escallonia.

Member of Mayor's Task Force for revising the San Francisco

street tree ordinance. 1984-1985.

Member of Street Tree Advisory Board of the Department of Public Works Department, San Francisco, 1985--.

Honors.

Massachusetts Horticultural Society, Silver Medal for 1977.

California Native Plant Society, Fellow, 1980.

Member of the following scientific and/or professional societies:

American Society of Plant Taxonomists

American Association of Botanical Gardens and Arboreta

American Horticultural Society

American Institute of Biological Sciences

California Botanical Society

California Horticultural Society

California Native Plant Society

Garden History Society

International Association for Plant Taxonomy

International Dendrology Society

Northern Nevada Native Plant Society

Royal Horticultural Society

San Francisco Friends of the Urban Forest

Sigma Xi

Society of Woman Geographers

Strybing Arboretum Society of Golden Gate Park

Zoological Society of San Diego

INDEX -- Elizabeth McClintock